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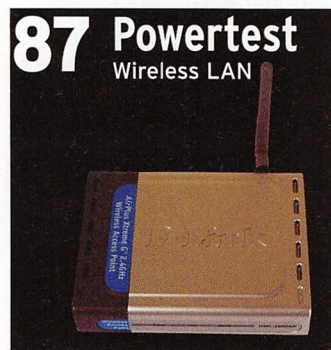
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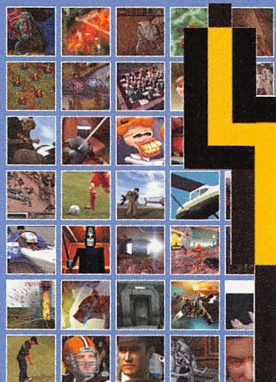
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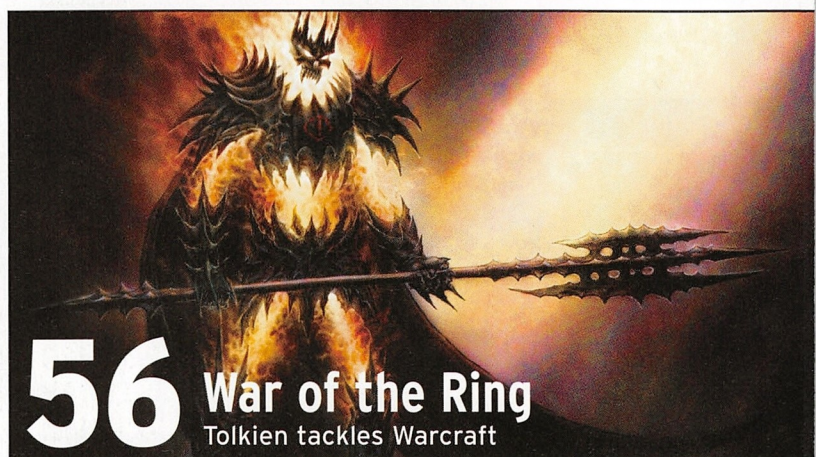
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Win the 100 best PC Games of all time, as listed in our Top 100 list of issue #90!

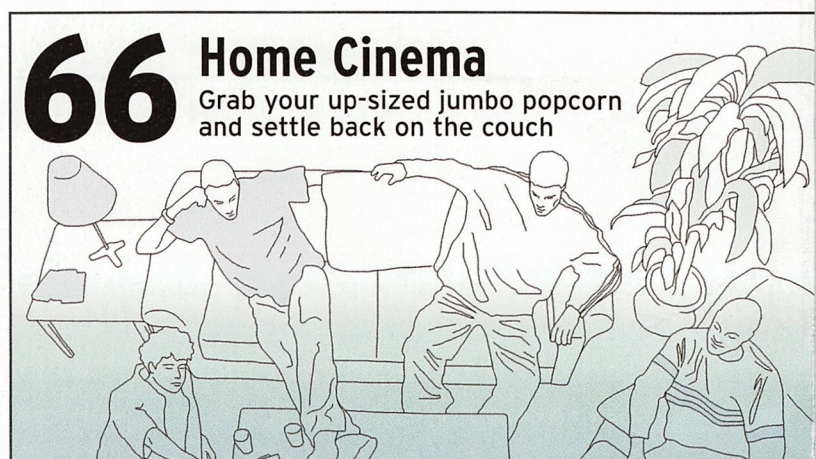
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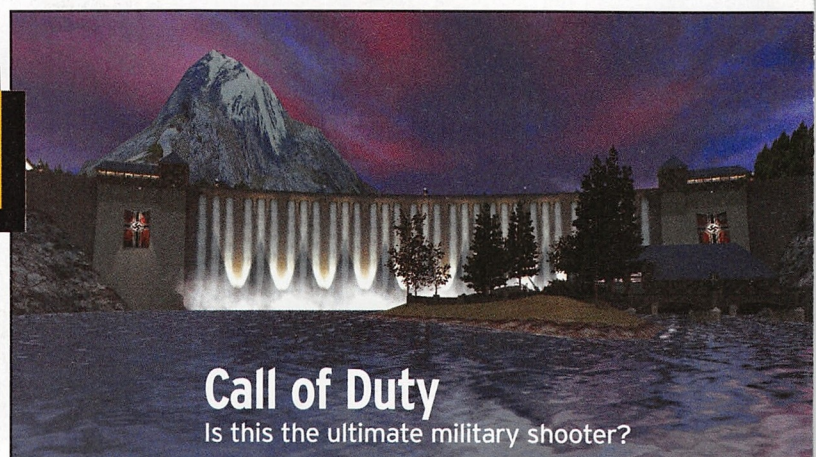
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Call of Duty
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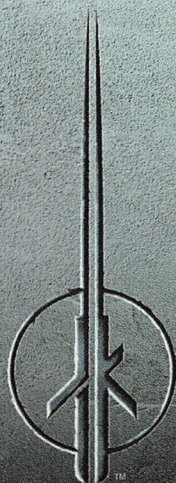
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Quake 3's not dead

Who's excited by Half-Life 2? Or Doom 3? Or STALKER: Oblivion Lost? Or maybe Medal of Honor: Pacific Assault? Right, that accounts for most of you then, save for a few miscreants. But why?

It's because they look cool, isn't it. Because the technology driving each of these games is new and exciting and unlike anything else around at present. The accepted wisdom says nothing can touch these new engines and the incredible potential they allow for fresh and revolutionary gameplay experiences. Look at Half-Life 2's physics and character models! Look at Doom 3's real-time lighting! Look at STALKER's massive, detailed environments! Look at Pacific Assault's crazy ragdolling and combat AI! Wow, it's like being in the future, man! Only now! (Or, at least, in a couple of months time.)

Then along comes Call of Duty. As Daniel writes in his feature on page 48, we weren't expecting great things from this title. It is, after all, yet another bloody WW2 shooter. But then we actually played the damn thing, and... Jesus!

Imagine Allied Assault times ten. No, scratch that - imagine the Omaha beach landing in Allied Assault (by far the best part of the entire game) times ten. And then imagine that same degree of nail-biting, shit-your-pants-in-fear-for-your-life atmosphere across every level in the game. This is one intense experience.

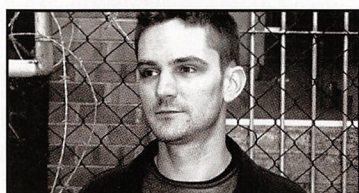
And you know what? Guess which engine lies beneath it

all? The Quake 3 engine. Sure, it's a heavily modified Q3 engine, but it's the same base tech that's now four years old. Infinity Ward has performed some incredible technical feats here, but perhaps the most impressive of all is realizing what makes a great game. It isn't the engine - though it can help - rather it's about nailing the design. We'll have the demo next issue so you can experience it for yourself.

David Wildgoose,
Editor
davidw@next.com.au



The ones to blame:



David Wildgoose
EDITOR

"We're only interested in looking cool in front of 13 year olds"

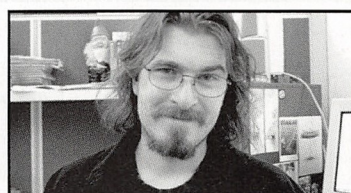
Playing: CM4. Still.



Dina Oh
SUB EDITOR

"I'm going south of the border, down Mexico way"

Playing: Hookey



Daniel Wilks
SENIOR WRITER

"I'll kill the next person who calls me Danny"

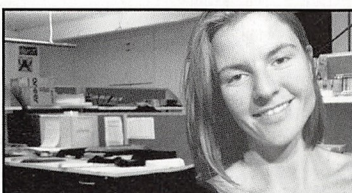
Playing: Starsky and Hutch



Bennett Ring
DEPUTY EDITOR

"Cigarette break? Anyone?"

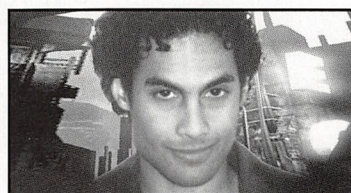
Playing: Desert Combat. still.



Shari Davies
ART DIRECTOR

"And now I have to find my passport"

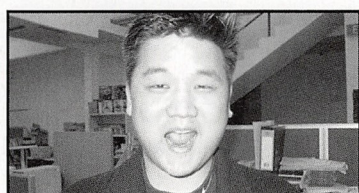
Playing: I work on a Mac



Timothy C. Best
SENIOR WRITER

"Women want to be me and men just want to be with- no wait..."

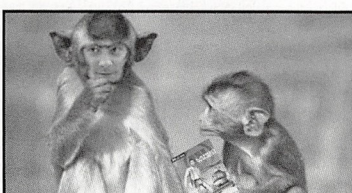
Playing: With weighty philosophical concepts



Amos Hong
DISC EDITOR

"Never judge a book by its cover. Make sure you read the whole bloody thing before you buy it."

Playing: Love. The most dangerous game of all



Joel Graham
ADVERTISING MANAGER

"Say hello to my stinky little friend."

Playing: Halo on Xbox. Rebel.



Anthony Fordham
SENIOR WRITER

"Canberra is just a giant alien golf course"

Playing: Republic. Without a manual

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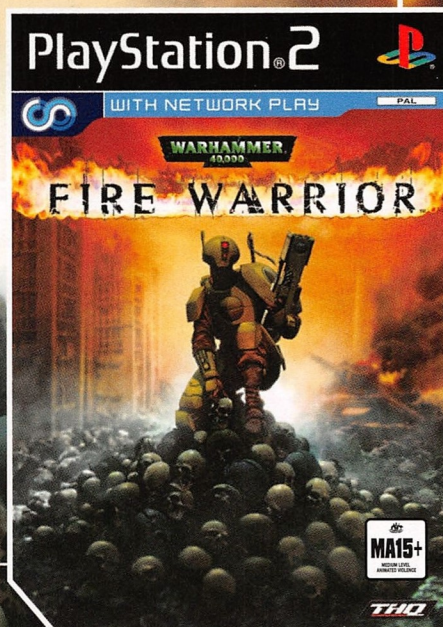
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- Gamespy

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HEROES

Atari is offering a free Heroes game to the author of every letter published in Inbox! This month's game is Unreal Tournament!



MISLEAD BY 3DMARK

I read your videocard reviews in PCPP#89 and was rather surprised to see how biased it was. Please don't get me wrong, I have been a loyal reader since PCPP#21, but this review placed too much emphasis on 3DMARK03. The GeForceFX 5800 got a rather crap 3DMARK, while the RADEON 9800 a rather impressive one. Yet when the cards were tested in UT2K3, they were both practically equal. Personally, I really couldn't give a damn about what 3DMARK gives me. All I care about is smooth gameplay, and I think a lot of readers are being misled by 3DMARK. Sure it gives you an indication of how a graphics card will perform, but I think there is too much emphasis placed on its marks. Perhaps people should reconsider the testing process by doing more in-game tests, rather than relying on 3DMARK. We'd probably be surprised to see how equal the performance between GeForce and RADEON is during gameplay. Ultimately, what this means is that 3DMARK results should make up less than the current 90% when assessing videocard performance.

Gareth

We agree that synthetic benchmarks are not to be

used as the basis of a review, hence the introduction of our new PowerTools, which rely for the most part upon tests using real world games. As for the GeForceFX 5800 - sorry, but we stand by our opinion that the RADEON is a much superior card, especially when price (at the time of writing) was factored into the review. And have you heard how bloody loud the 5800 is when doing 3D tasks? Urgh. Even NVIDIA has publicly acknowledged that they dropped the ball with the 5800.

INFERIOR FORMAT

First, I want to thank you SOOO much for the 25 minute Half-Life 2 movie on the PCPP#89 DVD. I'm still cleaning the drool out from my keyboard. Secondly, I showed my PS2 loving mate this movie and you know what he said? (You might want to sit down before reading this.) "It'll come out on PS2." I have never laughed so hard in my life. As if an underpowered marketing tool could run something as beautiful as HL2. Oh well,

if he wants to continue playing sub-standard games on an inferior format then who am I to judge? Keep up the kick-arse work and tell Paul Noone we miss him.

Dean Churchman

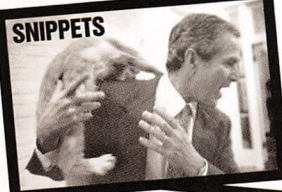
Paul says to say that he misses you, too.



PICK UP A CLASSIC

I just read Stewart Waldron's letter, My Chipped Friends (PCPP#89), and it made me write in on a similar theme. I'm currently studying Yr. 12, and as a result don't really have time for a job. I'm also a gamer, which isn't really a good combination. However, I've managed to find a way around it. I prefer to buy games a year or two after they have been released, and there are several reasons why. Firstly, and most importantly for me, they are cheap. I can usually pick up a 'classic' game for \$20 or less, for example, Powerslide, UT, and Imperium Galactica 2. Plus, by the time I get the games, most of the bugs have been fixed, and there are thriving modding

SNIPPETS



How shizered is that.

Damian Jones

FROM THE FORUMS

Ruined for all other games

Subject: Half-Life and Halo have spoiled me

I don't know about anyone else, and maybe this ground has been covered before, but I find nothing really grabs me since Half-Life on the PC and Halo on Xbox. Don't get me wrong, this is not an exercise in nostalgic idyll. I think those two games in particular raised the bar so high that nothing since has come close. Is it any coincidence that the two games I'm most looking forward to are, yep, you guessed it, Half-Life 2 & Halo

2? Some games since have undoubtedly been good, witness BF1942. But, and it's a big one, only for the multiplayer aspect. I totally disagree with BF1942 being listed as the best game around, a la Top 100 Games (PCPP#90). Both Half-Life and Halo provided a compelling singleplayer campaign, as well as an engrossing multiplayer experience. No other games, in my opinion, come close to being as well rounded. Years after its release, HL is still phenomenally popular and

Halo remains the best reason to own an Xbox. Both of these games have their flaws. Half-Life's Zen levels have received the flogging they deserve and Halo's architecture can get a bit repetitive, but such quibbles pale when each game is considered as a whole - and they are both left standing head and shoulders, hell, most of the torso as well, above the competition. Maybe I'm just getting too old for games... Any thoughts? Rubicon, Crate

I say wait for the next few games like HL2, Deus Ex 2 and Halo 2 and it'll all come good again. On another note, PC version of Halo will be getting the flamethrower, which wasn't in the Xbox version. CLL, Jedi

I thought Half-Life was mildly overrated, but that's probably because I didn't play it until a couple of years after it was released. Didn't seem as amazing as everyone said. Random, Great Claw

Half-Life, Torment and System Shock 2 remain the holy triumvirate of gaming: the Father, the Son and the Holy Ghost. We shall ne'er see their like again. In years to come we shall paddle down rivers and see their likeness carved into great rocks, and feel a sense of awe at our forebears. Grishnahk, Jedi

Waaaaa too much Lord of the Rings for Captain Haddo... err... Grishnahk. EIPresidente, 007 & 1/2

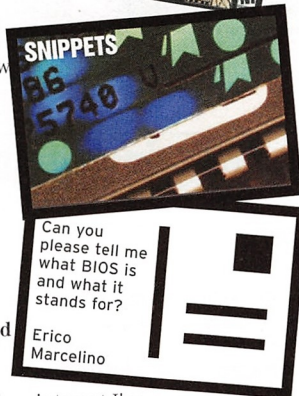
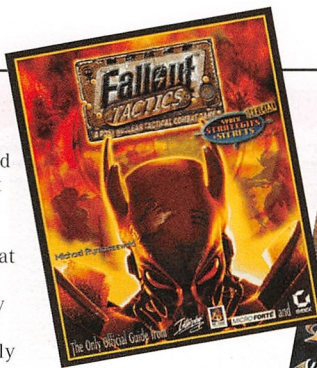
communities working on the games. Sometimes, I also get the games reduced heavily, for example, I got Arcanum and Fallout Tactics the other day for \$20 and \$10 respectively at a sale at a well-known electronics store, and they were still in the original boxes! The second, slightly depressing, reason is these cheap games are all that will run on my computer (a Celeron 400), but I don't really mind because they have great gameplay! Basically, what I'm saying is that you don't always need to get the newest games as soon as they come out, just wait a while and you'll get them cheaper - it's not like they get worse as time goes by! I have a fantastic collection of games, and they'll last me a LONG time - those games in the budget bin aren't always bad!

Ben Whelan

They're treasure troves, them there bargain bins!

MONKEY WRITERS

It has been said often, and even in these hallowed pages, that maybe developers should consider hiring writers to make up a decent storyline for their games. I am currently hooked on anime and have come to realise that the Japanese can write a better story than the 1,000 monkeys we call games writers who are chained to typewriters writing 24-7. There are numerous examples: Ghost in the Shell was revolutionary in exploring the ideas we use to define humanity and has also been labelled as the inspiration for The Matrix trilogy; Neon Genesis started as robot combat and turned into a story delving deep into the human psyche, and the list goes on. I can honestly say that Deus



Ex is the only game I have encountered that gave a storyline that would pull you one way and then throw you into another. With anime storming the world, maybe game developers should sit up and go, "Hey, maybe we should make a game like that." If they don't, we can always go back to the monkeys. They're bound get it right some day.

Stewart Ward

Effectively integrating a compelling narrative with gameplay is a major issue within the development community. Titles such as Deus Ex or Planescape: Torment require an enormous amount of extra work to get it right - work that perhaps their sales figures don't quite justify. You can see why many developers simply don't bother and instead stick with non-interactive cut-scenes to reveal the story. Most gamers skip through such cut-scenes anyway, so why expend resources on something that only a minority will ever appreciate? What a sad state of affairs.

PATRONISINGLY EVALUATING

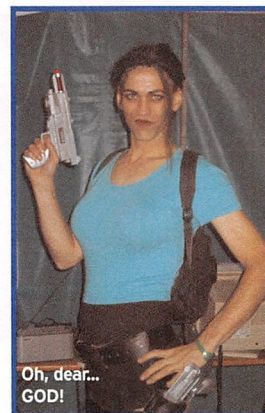
I am an academic in the humanities who is also into gaming. A rarity, at least amongst the colleagues of my department and pretty much any fellow social science and humanities researchers I've ever come into contact with. Anyway, as a matter of personal

interest I've been examining the recent furore and spate of articles surrounding violence and sexism in gaming. What particularly surprised me was the fact that very few of the people involved in the research had any idea of the gaming community or the culture of online gaming. People writing articles on the sexism of gaming were producing wads of material on Lara Croft, which is scarcely representative of state of the art gaming. More to the point, it wasn't even research on the game itself but on the marketing associated with the game, which comes from a completely different section of the industry and is only peripherally involved in the actual experience of playing the game. You rarely, if ever, see any significant analysis of more sophisticated games like Thief, Civilization, Deus Ex, Alpha Centauri, Planescape: Torment, or Fallout. Further, almost all sociological, cultural studies and psychological research into computer games is oriented at intensely mass-marketed games aimed at 10-15 year olds with most of the focus on marketing strategy, hand-eye co-ordination and a complete ignorance of the community context in which people play these games. This is a serious flaw which I think compromises the validity of the research. When I teach anthropology one of the most critical points to get through to students is that you must

spend large amounts of time with a community (at least a year as a rule of thumb) before you can have any idea of the meaning and significance of its cultural products. What we see here is people standing back and patronisingly evaluating a community by virtue of what the marketing aims at. The community is interpreted by people outside of that society and who perceive it condescendingly. Students aren't allowed to get away with it, so why should published academics? Possibly the only exception I've seen are the excellent articles on the site, womengamers.com. So I make a call here that most of the research conducted into the gaming community and computer game sexism and violence is inherently flawed and driven by a political agenda characterised by fear of a sub-culture and community they know very little about and regard with contempt. If anyone is reading this article and is engaged in research into computer gaming and, particularly computer game sexism and violence, I challenge you to play through the games that achieve the highest critical acclaim, play them through and join online gaming communities as a participant. There is certainly issues regarding sexism and violence out there but if you cannot engage in participant observation the research is little but propaganda. For starters I think I should start writing about it myself.

Dr David Waldron

Perhaps it's time for PCPP to start writing about it, too.

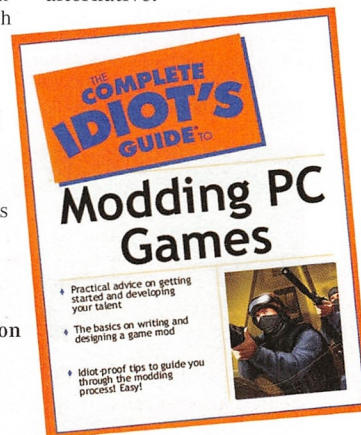


A FEW ENGINES

I want to get into modding and I was wondering what books and software you need to get? Could you please recommend a few engines that are easy for beginners.

Blinx du Plessis

The Half-Life engine is the obvious choice, if only for its already massive mod community. You're bound to find plenty of helpful beginner's tutorials online. Also look at Neverwinter Nights, if you're into RPGs, or Battlefield 1942, which is steadily establishing itself as a viable HL alternative.



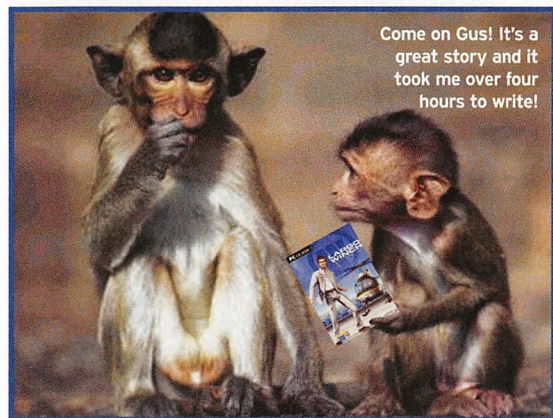
THE RODNEY MAYHEW UPGRADE UPDATE

Thanks for publishing my email in PCPP#90 about my Pentium 4 system. I have updated my system again. It is as follows:

- Intel Pentium 4-2.4C CPU
- ASUS P4C800 Deluxe Motherboard
- 2xCorsair PC3500 XMS 512MB DDR-RAM
- ASUS V8460 GeForce 4 Ti4600
- Audigy 2 soundcard
- Samsung SyncMaster 151s
- Pioneer DVD-A05S DVD-ROM
- Sony CRX220A1 burner

Keep up the great magazine.

Rodney Mayhew





Insight

QUICK PEEK AT AMD

Welcome to the world of 64-bit computing. Almost.

In association with  **qantm**

Bennett Ring

As you read this, the first Athlon 64 processors are hitting store shelves, promising to drag the PC industry into the realm of 64-bit computing. We'll have a full length feature next month focusing on what this CPU means to you, and whether or not you actually want it, but in the meantime we thought we'd give you a few details about AMD's latest chip.

There are many rumours floating around the Net about this being a very limited release of the Athlon 64 until AMD can move to a 90 nanometer fabrication process, so we put this question to AMD. Their response: it's going to launch in volume, with none of the supply shortages of the Athlon XP. Time will tell if this is actually true or not.

In case you hadn't heard, the biggest feature of the Athlon 64 is the

fact that it is compatible with 64-bit operations, whereas today's PCs are all based on a 32-bit architecture. This basically means that it can handle more memory, and can make more precise calculations. Unfortunately, there currently isn't a single 64-bit game to run on the platform, as well as no 64-bit version of Windows... yet. However, the Athlon 64 is compatible with all 32-bit applications, meaning you can quite happily run Windows XP and today's games on it. And when we do finally get 64-bit games, it should lead to a leap in graphical prowess. As Tim Sweeney says, "...gamers will be able to literally count the beads of sweat on the foreheads of their opponents. 64-bit computing simply means a level of realism that, until now, has existed only in the real world." Now these are

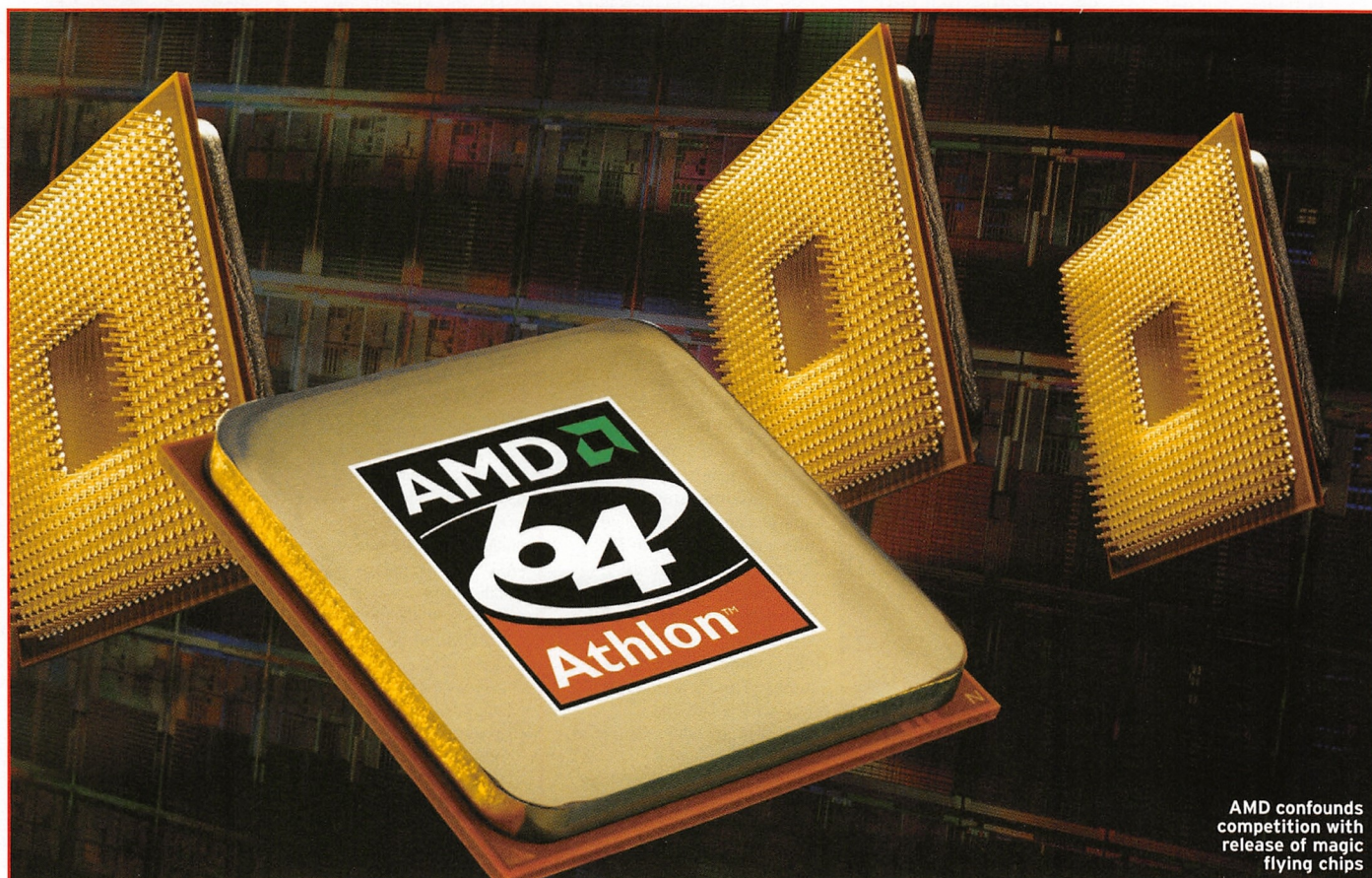
big claims to make, so we'll wait until we see some real 64-bit games before we start gushing.

According to the press literature we've received, AMD is targeting the initial launch of this processor at gamers and prosumers (which is just a fancy way of saying advanced PC users.) From what we can gather, the Athlon 64 is going to be more expensive than most AMD users are accustomed to; expect it to fetch around the same price as an equivalent Pentium 4. So for the launch model, which will be the 3200+, we wouldn't be surprised if the CPU will sell for around the \$800-\$1000. Whether or not existing AMD users, who tend to be a rather fiscally challenged group, will fork out this much for the Athlon 64 remains to be seen.

There are going to be two different Athlon 64 chips at launch - the AMD

Athlon 64 FX-51 and the Athlon 64 3200+. They both run at 2GHz (which, according to AMD, gives them the same performance around the same as a 3.2GHz Pentium 4), both are 64-bit compatible, and both have 1MB of cache. But the FX-51 will run approximately 10% faster than the standard Athlon 64. From the early tech specs we've seen about these two CPUs, this performance is due to the use of a 128-bit + 16-bit integrated DDR memory controller on the FX, while the Athlon 64 has a 64-bit + 8-bit integrated DDR memory controller.

AMD hasn't been doing too well of late, so there's a lot riding on the success of the Athlon 64. We'll let you know what we think of it next month, after we give it a thorough whipping in the labs. We can only hope that it's all AMD has hyped it to be.



AMD confounds competition with release of magic flying chips

MAKING CONSOLES PC

A PC in a console's clothing

Timothy C. Best



Digital Interactive Systems Corporation (DISC) is developing a system that puts a compact PC into a swish little package, comes with a gamepad and features a TV connector. It even comes with software that recognises PC games, auto installs, configures and runs them, as well as auto-updating with game patches over the Net.

This is PC gaming console style. Systems ranged from a 1GHz VIA powered system with 256MB RAM and a 40GB hard drive, to a beast featuring a 3.2GHz Pentium 4, 1GB DDR RAM, a DVD/CD-RW drive, Seagate Barracuda 120GB HDD, FX 5900 Ultra 256MB videocard and a Creative Sound Blaster Audigy 2 Platinum soundcard.

It appears both systems will come with broadband and modem built in and the prices will range from \$US299 to \$US699.

A console PC could be cool. For one, you have a drop-in and play

games machine with access to a huge range of titles, which is ideal for LAN sessions (assuming they don't skimp on the networking), and which can take advantage of growing number of home entertainment systems with huge TVs and amazing surround sound.

The drop-in and play software is also causing a splash and will appear on Gateway's Media Centre PC - adding a 'game' option to the install menu - and Alienware and Dell are also pricking up their ears.

On the electronics side, Kinyo, SVA and ABS Computers have already built their DISCover derivatives and Hyundai, Pioneer and Apex are also showing some interest.

Expect future versions to also record TV and function as a full media centre.

It all sounds pretty neat, and anything that makes PC gaming less fiddly has to be a good thing, right? Well, while it has the strengths of a console and a PC, it also has the

combined weaknesses. The question of how upgrades will work hasn't really been addressed, beyond the claim that it is possible on high end machines.

These high end models cost three times as much as competing consoles, don't have the advantage of giving developers set hardware to code for, and require a big - preferably high definition - TV to really make the most of it.

The DISCover is a super bold move; we'll just have to see if DISC is as clever as it is brave. The question here is: how much are gamers willing to pay for convenience? At very least, the drop-in and play software sounds like a winner.



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SECOND TIME LUCKY

ATI wins Xbox 2 bid while NVIDIA's future wavers

Anthony Fordham



Xbox 2
concept or the
Art Director
being cheeky?

So what now NVIDIA? Two years ago, no one could touch this plucky graphics company. Fresh from its victory on the fields of 3dfx, it had not only won gamers' hearts but it formed the core of what was being touted as the world's most powerful gaming console - the Xbox.

Indeed, NVIDIA has until recently been the very definition of cutting edge graphics, with proponents such as id Software's John Carmack hailing its banner and building next-generation engines to specifically take advantage of NVIDIA hardware.

But the rot may now have set in with Microsoft awarding the lucrative next-next-generation console graphics contract to arch-rivals, ATI.

ATI has confirmed that it will be providing the graphics chip for the next Xbox, currently referred to by Microsoft as Xbox Next. The release date of the console has not been confirmed, but it should be far enough in the future to ensure that

console versions of the likes of Doom 3 won't tax the hardware unduly.

While Microsoft commented to online newshounds, The Register, that the company "selected ATI after reviewing the top graphics technologies in development and determining that ATI's technical vision fits perfectly with the future direction of Xbox," closer examination of the issue suggests that the real win here for ATI was due to business, not technology.

The relationship between Microsoft and NVIDIA soured after the Redmond giant tried to pass price cuts to keep the Xbox viable in its early days on to NVIDIA. While Microsoft was forced to be adaptive to a violent market, NVIDIA tried to remain firm on the original terms of the supply contract.

That's not to say that ATI hardware isn't proving increasingly attractive to gamers who know their stuff - the Radeon range of cards continues to challenge NVIDIA in terms of both power and pricing.



NVIDIA LEAKS FUTURE CARDS

Chip company's own drivers spoil the surprise

Anthony Fordham

In an industry where secrets are jealously guarded and scoops pay big in terms of cash and street cred on a million online forums, the latest leak on NVIDIA's future direction has come from an unusual source - its own drivers.

The Detonator 45.23 drivers list support for three cards that don't yet officially exist - the 5200 SE, the 5600 SE and the 5900 SE.

While the 5600 SE has been mentioned in passing as a value version of the mid-range GeForceFX 5600, the other two chipsets are news indeed to a rumour-hungry gaming population.

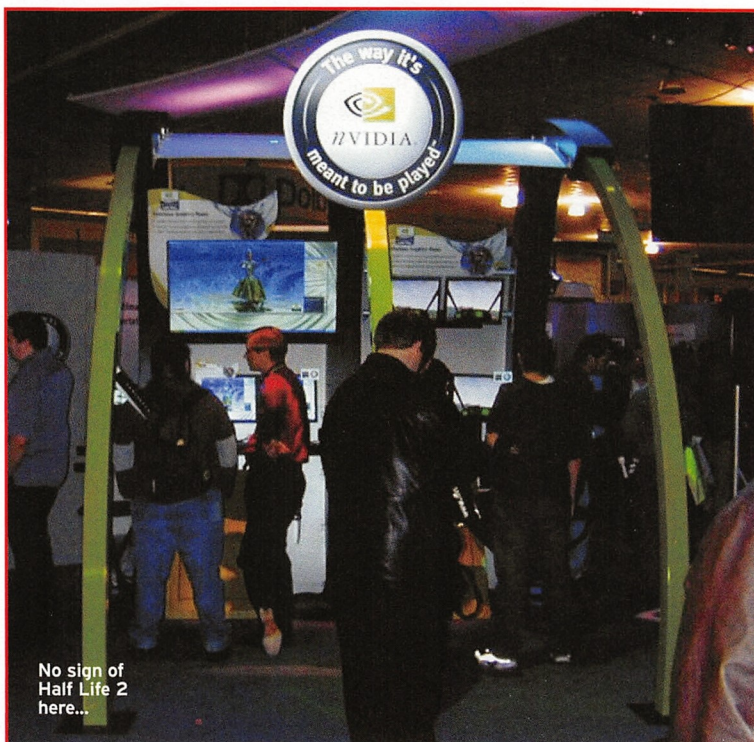
The appearance of the SE brand at all three points - high, medium and low - suggests that NVIDIA will be releasing value versions of the GeForceFX - hardly surprising since it did the same for the GeForce2, GeForce3 and GeForce4 with the MX budget brand.

The official NVIDIA roadmap still doesn't mention the SE versions of the 5900 or 5600, but the 5200 SE is apparently due in the second half of the year, at the same time as the GeForceFX 5700.

Oddly enough though, the 5700 doesn't appear in the drivers' list of supported cards, which points to a delay in its shipping date and an arrival closer to November or the very lucrative coming Christmas season.

Whatever the drivers actually mean and whoever is responsible for what looks like a bit of a foul-up on NVIDIA's part, the company is still the only manufacturer offering DirectX 9 cards at all price points, while main rival ATI still limits full DirectX 9 support to the upper end.

In other NVIDIA news, the company has confirmed that next year's cards will support the emerging PCI Express next-generation expansion bus. The NV36X and the NV40 will work in both AGP 8x and PCI Express boards, while the NV41, NV42 and uber-chip NV45 will be PCI Express only. Actual names for these new chips have not yet been announced.



No sign of
Half Life 2
here...

MONEY MATTERS

Hits Make the World Go Around

Timothy C. Best

With the end of the financial year rolling around (well, at least for some game-producing countries), there has been a lot of money information floating about, and while we don't want to turn PCPP into the Financial Review, the results say a lot about the games industry.

Take Eidos, Britain's largest game publisher, for example. Without Tomb Raider: Angel of Darkness on the 2003 books, they had to revise their profits from £15.5 million to £6.5 million. In the end the game sold like hot cakes in the last few days of the month bumping the profit estimates back up to £15.1 million.

Then we have Atari. Its first quarter results for 2004 (that ended June 30, 2003) showed a 17 percent boost in revenue. Entering the Matrix translated to entering more cash.

Ubi Soft also came out strong,

posting a record turnover last year. It lists its big earners as Rayman 3: Hoodlum Havoc and Tom Clancy's Ghost Recon, but these pale in comparison to the numbers Splinter Cell managed across all platforms.

Activision is down 17% on revenue from the same quarter but that's because last year they had the Spider-Man movie tie-in game; and it has predicted minor losses every quarter except the third, when it releases True Crime and the next Tony Hawk game.

Without a major new release, Midway took a \$US54 million loss just in the second quarter.

On the other end of the scale we have EA. It released its first quarter profits and they were 50% higher than the same time last years at \$US18 million, with things estimated to be just as rosy in Q2. In the last year, it has had 22 games that sold over a million units and on a per dollar basis it owns 20 percent of the US games market.

Sega posted a fairly big operating loss attributed at least partly to EA. Sega had estimated sales of 1.6 million copies of NFL 2K3, but only moved about a fifth of that number as Madden 2004 crushed them.

EA dominated the charts with the Sims, Harry Potter, Medal of Honor, Battlefield 1942, C&C Generals and SimCity 4.

Making video games is meant to be hit and miss, but 22 million-selling games can't be a fluke, so what is EA doing so right? While it might not push too many barriers, EA definitely has its finger on the pulse, as seen with Battlefield 1942's ideal timing. Beyond that, who can really fault its quality control? EA may take a big-business approach to gaming but that's not always a bad thing.

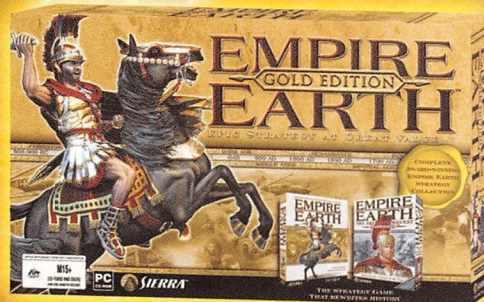


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ANNULATED VIOLENCE

PCPP

Natural Selection 2.0 FOR HALF-LIFE

For: Half Life ■ Version: 2.0 ■ Size: 119MB ■ Rating: 5/5 ■ URL: www.natural-selection.org/

If you're reading this page with any interest there's a good chance you've heard of Natural Selection, the most ambitious and interesting mod to come along for quite some time. The idea of pitting human marines against various alien hordes is nothing new, but the approach the developers have taken, necessitating teamwork with the human side, insisting on a commander character for the human side and instituting an element of realtime resource management has elevated the mod from being just another team based deathmatch to something special, indeed. The command player is the most unique aspect of the game - one player essentially plays like an RTS, issuing orders to troops, dropping ammo and other equipment, as well as maintaining and upgrading the base to extend the reach of human influence. Playing the aliens is a much different, far more action packed experience. Initially starting out as relatively harmless creatures, the aliens evolve into more complex and deadly forms as their sphere of influence expands and more hives are built. In the hands of a lesser mod team, Natural Selection could have been an absolute debacle, but thankfully everything has been pulled off with a mixture of genius and intrigue that will have you coming back again and again. If you want strategy, play as the humans. If you want action, play as the aliens. Just play it.

A word with SAM MAJOR

The most interesting news coming out of the Australian mod scene at the moment is the Australis Freelancer mod, which will not only add Oceania as a system but will also include new resources, factions and purchasable battleships! What's even better is that the author of the mod is a member of the PCPP community. We recently had a chance to have a chat with Sam Major about his mod.

What was your inspiration for the mod?

Well, when I first got onto the PC gaming scene there were so many games that could've been better. Then I got Deus Ex. There were so many cool scenarios I could think of and, thankfully, Ion Storm provided tools to do whatever I want. I started with my first mod just to muck around and learn the tools. I got better and learnt to mod for more games, which now stands at a very respectable list. The inspiration came from the option of creating MY own world with MY own story; that's the inspiration. It's been like that

ever since my Nintendo 64 and first PC with Load Runner. I would spend hours making the perfect level for Load Runner. I knew I wanted to be a games designer, but I couldn't at that age, but a couple of years later, modding had burst onto the scene and so I joined in.

Why an Australian System?

Each part of Freelancer had a very distinct identity. Liberty, Bretonia, Rheinland and Kusari all were very different and special in their own way. Whether it was the references to current cities/locations or the very similar style in building/ship design. One day, I thought, "How cool would it be to have an Australian part of the game?" So it started, I planned everything, from new systems to ships, weapons, features, etc, and began. Ships were to be named after Australian icons; you'll find the Commodore SS, Monaro, Astra, XR-8 and more in the mod. Stations and planets, too, would resemble their real life counterparts. For example, Melbourne is called Melbourne Factory in the mod and is Australis's (the system's name) primary ship producer, just as Melbourne now has a giant Holden Factory. I also saw how Australia and Oceania had a very distinct difference to other places and could create a very different mod. Oceania now is the home of pirating (Indonesia, Singapore, etc), thus the Oceanus system is full of pirates selling illegal goods like Slaves. You will find no law enforcers in the system. So the mod is now about 20% fully

complete (at Alpha 1.2 stage) and still very different to other mods. The ships, news, setting, etc, is all very different to the other systems and I'm hoping to create a very different world to current ones.

Any big plans for the mod?

Lots! Coming into the universe are buyable and controllable battleships, nomad fighters and nomad battleships... obviously, at a price. New commodities include Beer (kindly supplied by the new Victoria Bitter Company/faction), Slaves, and Pirate goods among them. New Factions, which aren't in yet will include the Australis Defence Force, Oceanus Pirate Co., NZ Security, Victoria Bitter and Holden Technologies so far, with more to be decided. But my favourite new addition has to be the Rimworld System. It's specially designed for


groups or clans to battle it out for control over the whole of the AU Sector (Australis, NZ, Oceanus and Rimworld Systems). With battleships, I'm hoping this to be a very big feature of the mod online; where multiple clans can team up and battle it out for supremacy against others, then split the profits. New features include buyable engines, so your ships engine can be upgraded at a price, as well as new weapons, torpedos, etc. My favourite new item is the warp drive. It comes built into engines, and though not really warping you anywhere, it'll take you across systems at speeds of 20,000! Very handy to get to, or out of, the heat of battle.














MGOLD

Can it be Mined?

Timothy C. Best



Multiplayer Network Lineup

 Underlight	 Warlords
 Astro Battle	 High Descent
 Metal Knights	 Territories 3069
 Exodus War	 Lands of Sorren
 Wrestling	 W. Challenge
 Able-Wyvern	 Star Knights

Multiplayer.com has announced a new game service. With a name like Multiplayer.com this probably won't blow your mind, but what is interesting is how it rewards the developers.

When you sign up for the MGOLD Multiplayer Game Network you gain access to dozens of multiplayer games for the one subscription price. The service tracks where the players are spending their time and then pays the developers accordingly.

MGOLD features more than a dozen titles from independent developers, including Exodus War, an e-mail-based html space strategy; Artifact, an empire building game where you start with one town; Call of the Warlords, an RPG strategy; the Shoot Wrestling fantasy league; Underlight where people play roles as opposed to roll-play and Star Knights, a game that pits you against player-controlled humans and AI-controlled aliens.

While these games won't crowd out Star Wars Galaxies or Lineage, the system could give us a window to independent games development of the future.

Multiplayer.com claims to get more than 100,000 unique visitors per month, which is plenty of exposure to get the ball rolling. Beyond that, what better way could there be for an independent developer to build a following than getting interested gamers hands-on with its game?

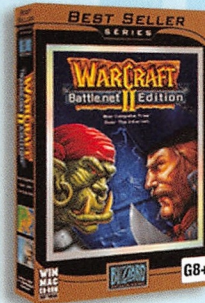
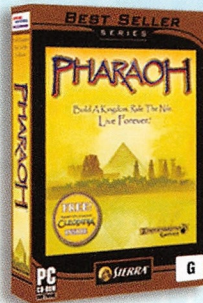
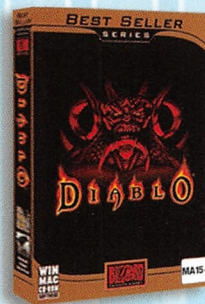
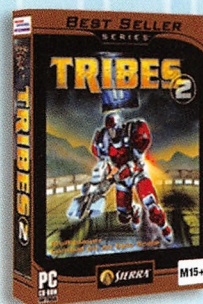
This system also advantages developers by giving them an early income, which they can invest back into the game to make it more complex, rewarding and appealing. Maybe this type of system will lead to a more evolutionary approach to game building.

Since the entry costs are so low for the developer, it also provides a forum for games with wild and woolly concepts. Without needing a publisher or advertising, the risks associated with innovation are much lower, and on the other side of the fence, MGOLD gives players who complain about "gameplay and ideas being sacrificed to business models and 3D graphics" a new stomping ground. It's about time independent developers had access to, not just the public, but a few dollars, too.

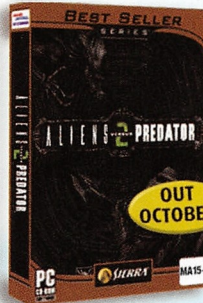
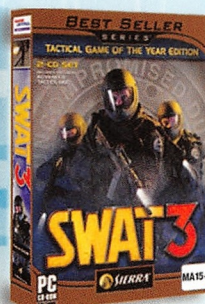


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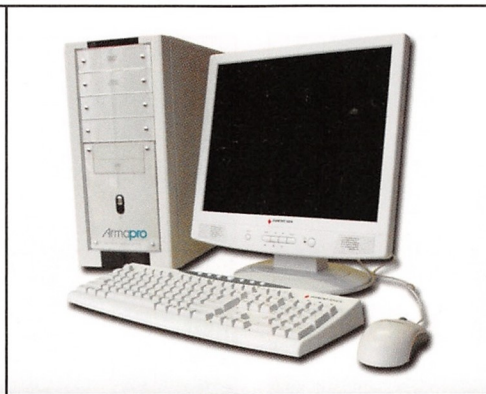


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- Intel PRO100 network connection
- 56k internal modem
- 6 PCI slots
- Floppy Disk Drive
- Internet keyboard and optical mouse

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RADEON 9800 vs GeForecFX 9500

They're not the quickest but they're still damn fast

Stuart Calvin

PRODUCTS

ASUS V9950

Price: \$649

Distributor: Cassa Australia

www.cassa.com.au

URL: www.asus.com

Score: 86

Summary: Performs at low-res, low AA/AF modes, but could be better at hi-res, high AA/AF modes. Needs partnering with a fast CPU.

ATI RADEON 9800

Price: \$500

Distributor: Game VISION

www.gamevision.com.au

URL: www.ati.com

Score: 90

Summary: Excellent results at higher-res, higher AA/AF modes and well priced but needs better performance at low AA/AF modes for slower CPUs.

your tin of mints then maybe one of the 128MB non-Ultra or non-Pro versions can keep you awake for around half the price. Apart from half the memory and about half the price, the major difference between these cards and their bigger siblings are the GPU Core and Memory speeds. The Core speeds for the FX5900 Ultra/FX5900 are 450/400MHz but their Memory clocks do not differ at 850MHz. The Core speeds for the RADEON 9800 Pro/9800 are 380/325MHz and the Memory speeds are 700/580MHz. Clearly, the FX5900 has a serious edge over the RADEON 9800 for sheer memory bandwidth (850 vs 580) but a more moderate 75MHz edge in GPU speed. This RADEON 9800 is a "Powered by ATI" unit and the FX5900 is an ASUS V9950. Is there a serious enough difference, at first look, to warrant an FX5900 purchase without question? Hi-res anti-aliasing is often the critical discriminator between cards because sm00thin' the jaggies is the aim of the game.

ATI RADEON 9800

The PCB of the RADEON 9800 is 'Fire Engine' red and the heatsink is a zooty aluminium jobby that will need replacing by overclockers. Fortunately

or unfortunately, it just about falls off in your hand without resorting to micro-surgery. Unfortunately, for overclockers, it will be difficult to cool the exposed SDRAM modules. But if what ATI claims is true, then you won't really need to push the memory speed further at all. The ATI is capable of 6x anti-aliasing (AA) and 16x Anisotropic Filtering (AF).

ASUS V9950

The ASUS V9950 is a Toorak-cool card. If your name rhymes with "acker" or "urdock" then you'll buy this card just for looks. It is looong at 217mm, heavy and British Racing Green in colour. Unlike the Ultra it requires just one cut-out slot in the case. The GPU's twin fan/heatsink setup employs copper fins to also cool the eight 16MB memory chips streaking along at 850MHz: overclockers may apply without further modding. The ASUS is capable of 8x AA and 8x AF.

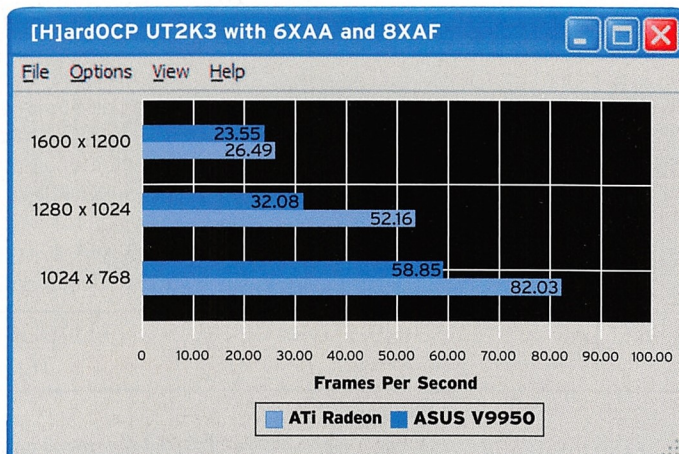
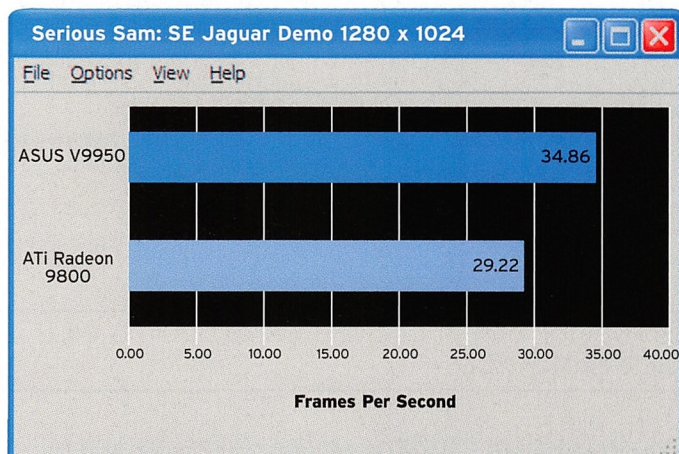
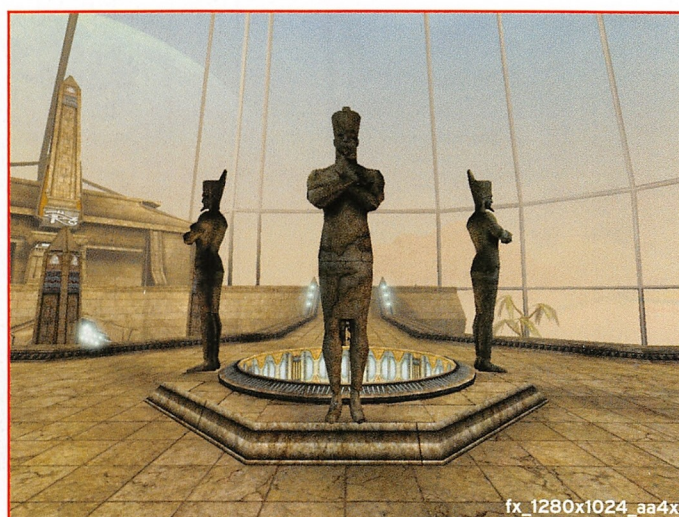
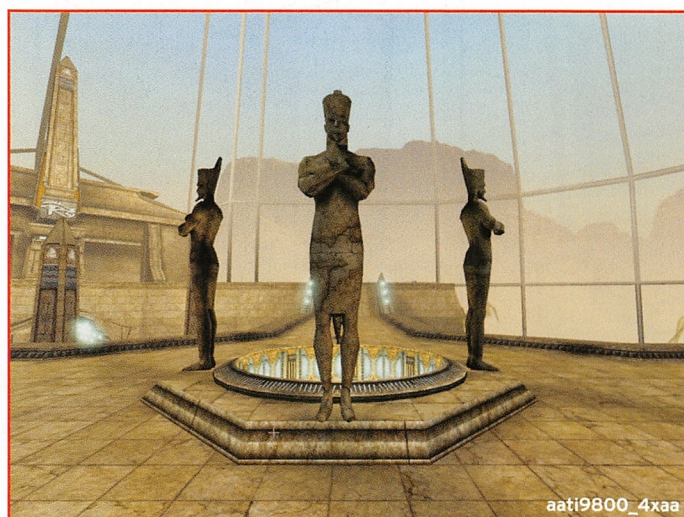
Overclocking

I used RivaTuner v-2.0 RC12.4 on the V9950 achieving a stable overclock of 438MHz on the core and 860MHz for the memory speed. Frame rates improved but not significantly at all

resolutions. For the ATI adaptor I used Rage3D Tweak v-3.9, achieving a stable overclock of 335MHz on the core and 610MHz for the memory speed. Again frame rates improved, but not significantly, at all resolutions. Past these combinations of speeds, I noticed some tearing and artefacts in UT2K3, but not a bad result overall.

Image Quality

The battle between video adaptors at this level, besides price point, is about AA and AF abilities. These technologies enhance image quality by removing jagged edges and bringing out fine texture detail for every portion of a scene, even difficult areas representing surfaces viewed from a sharp angle or from a distance. Intellisample HCT is NVIDIA's all encompassing term for their compression engine, improved z-clear, dynamic gamma correction, adaptive trilinear and AF/AA technologies. The CineFX 2.0 engine powers pixel and vertex shader processing, and UltraShadow Technology enables programmers to speed up the shadowing of objects by eliminating unnecessary areas from consideration. ATI offers SMOOTHVISION 2.1 for high performance and high quality



AA/AF modes, and SMARTSHADER 2.1 for shader technology. ATI are boasting better AA/AF technology than what NVIDIA has to offer and this is certainly true for specific models. Is this the case for the non Pro RADEON 9800? High quality AA/AF settings come at the cost of a framerate hit, just like game sound engines give hits of varying degrees.

Testing

Benchmarking was conducted in Serious Sam: Second Encounter v-1.07 using the Valley of the Jaguar and Maximum Quality settings from Beyond3D. Unreal Tournament 2003 patched to 2225 was used in the v-2.1 [H]ard|OCP Benchmark program. Timedemo 1 was used in Quake 3 Arena patched with Point Release v-1.32. Finally, 3DMark 2001SE Pro was

used for a variety of tests. Moreover, NVIDIA describe their Anisotropic Trilinear filtering technology as 'adaptive' to optimise performance, with the engine applying this technique only when it doesn't degrade performance. Whether this is cheating or clever is debatable because it seems to be disabled in the v-2.1 [H]ard|OCP UT2K3 Benchmark. ATI perform similar tricks but to a lesser degree.

Performance

Q3A

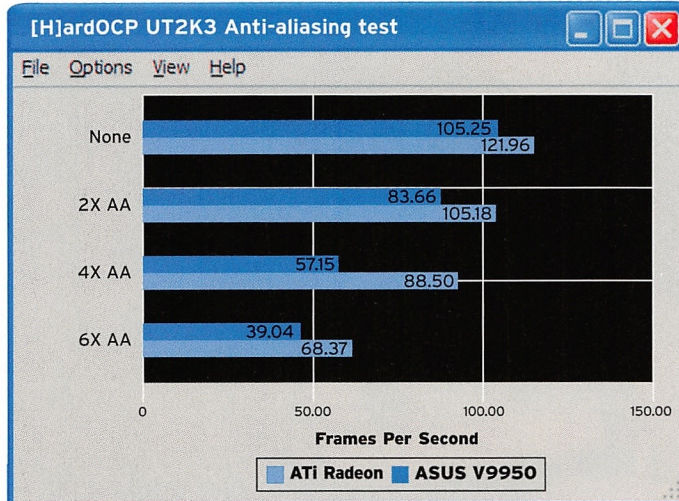
In the CPU intensive Q3A Timedemo, the V9950 was a clear winner in all three high resolutions.

3DMark 2001SE Pro

The RADEON 9800 was the clear winner without AA/AF at high resolutions. Surprisingly, with 4x AA enabled, the ASUS was the clear winner. This was corroborated in the 4x AA/AF results from Serious Sam:SE where the RADEON 9800 fell short by more than a few frames.

[H]ard|OCP UT2K3

In this GPU intensive tests, the ATI simply waxed the ASUS in these tests at all resolutions. Perhaps the ATI AA/AF technologies are better



than NVIDIA can produce.

Serious Sam:SE

With suspicions of Trilinear filtering skullduggery, the ASUS hosed ATI in the polygon-flinging Valley of the Jaguar demo at low or no AA/AF. At 6x/8x AA/AF, however, the ATI absolutely shone and waxed the ASUS by significant framerates.

Hi-res AA and AF

For both cards, lighting, shading and fog were exquisite in UT2K3 and SS:SE, but textures left much to be desired. At 1600x1200 in 6x AA and 8x AA mode, objects shimmered, especially walls and framerates were unacceptably low. Still, something around 4x/4x at 1200x1024 provides excellent graphics and performance. At 1024x768 a 4x/4x setting is the best compromise between performance and quality; some may

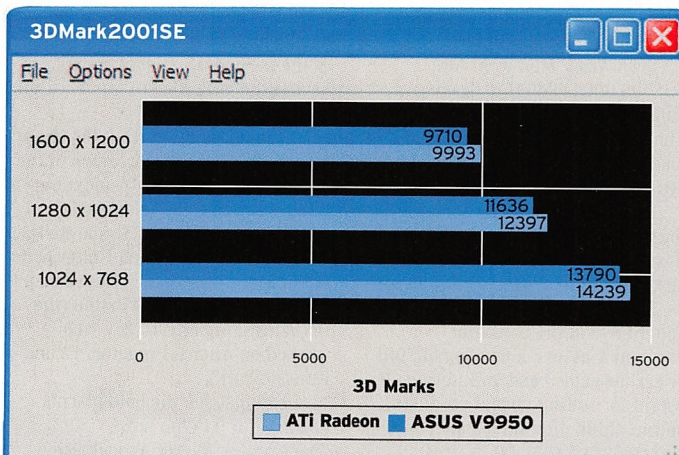
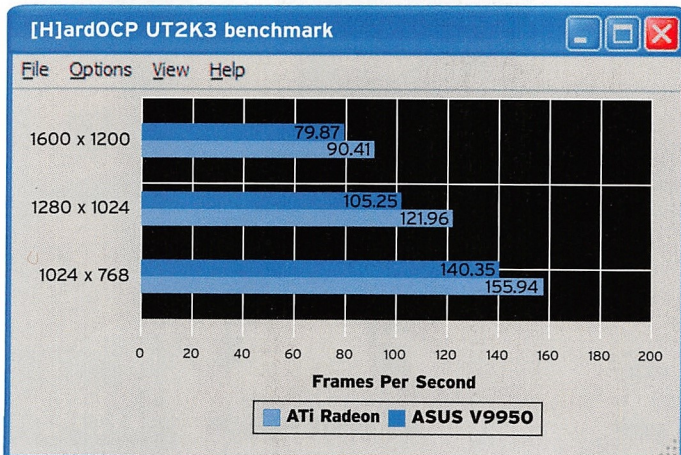
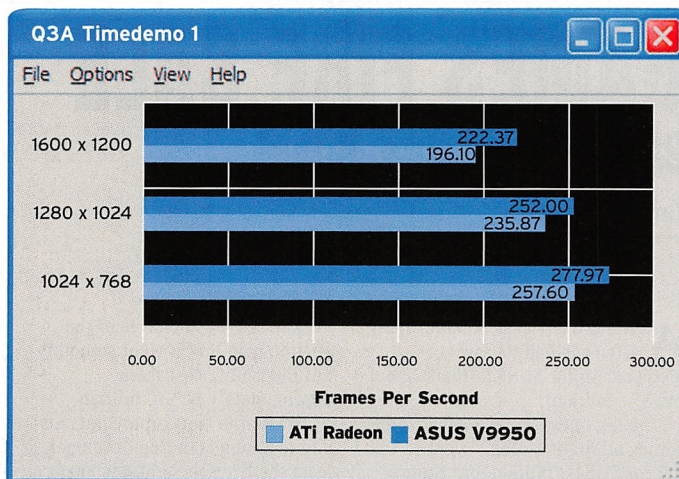
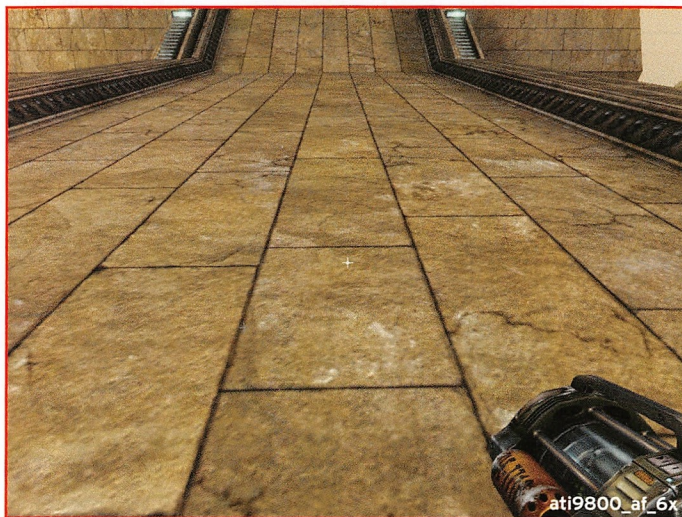
find 6x/4x more acceptable. A late model Pentium or Athlon would certainly allow outstanding results on 6x/4x at 1280x1024 or higher.

So? Which Card?

The ASUS is a performer at low or no AA settings, depending on the game. Gamers with slower processors would be able to use 2x/2x AA/AF settings without a noticeable hit. Where the ATI really stands out is with a higher combination of AA and AF modes, and at hi-res it's able to pull away from the ASUS. With its conservative memory and GPU speeds and their obvious headroom, and superior AA/AF technology and lower price, the ATI RADEON represents the pick of the two this time around.

TOOLS

- We used the ATI Catalyst 3.6 Driver Suite (v-6.14.10.6368 RADEON 9800) and NVIDIA Detonators v-44.03 (ASUS V59950), with a clean Windows install between adaptors.
- CPU: Athlon XP 2600+ CPU
- FSB: 333MHz
- MoBo: Gigabyte GA-7N400 Pro (F9)
- RAM: Corsair CMX512-2700C2 DDR333
- HDDs: RAID0 Western Digital WD360G Raptors
- OS: WinXP Pro SP1a





CASH RAIDER

There's Something About Lara

Timothy C. Best

There have been some really interesting developments revolving around Tomb Raider: Angel of Darkness. Due to delays, Eidos thought the game would miss the 2003 financial year, which played havoc with its profit estimates and angered shareholders.

This all proved a tad reactionary as all but 500,000 made it out in

time, meaning that Eidos actually hit its profit estimates. The remaining 500,000 sold quickly and Lara sold herself in line with what Eidos had planned. The funny thing is, that in amongst all of this money, the steps being taken are in line with the notion that Angel of Darkness had actually flopped.

Directly after the game was

finished, 'The father of Lara' Jeremy Heath-Smith not only left Core but also gave up his seat on the Eidos board. That was when the profits were expected to take a tumble. Scapegoat or sacrificial lamb, it's up to you to decide.

Now it has been announced that Eidos has taken the Lara out of Core's hands - even though it

created her Weird Science-style - and has passed the franchise on to Crystal Dynamics. Let's pause on that for a moment.

Eidos is Britain's biggest game publisher and Core is owned by Eidos. Lara Croft is quintessentially British upper class English Rose with a tough as nails thing happening. So how does it make sense to send the franchise across the Atlantic to be developed in San Francisco? Lara has survived some bad games but can she really survive being Americanised?

Finally, Paramount Pictures has come out and blamed poor box office out results for its movie Tomb Raider 2: Cradle of Life on the quality of Angel of Darkness.

The amazing thing here is that Eidos knows the game is bad, movie goers seem to know the game is bad, game reviewers are saying it's bad, even Paramount executives have cottoned on to the fact that the game is bad, but for some reason people are still buying it at an alarming rate. Let's hope all those sales were pre-orders.

GAMES FIRE SALE

3DO Going, Going, Gone!

Timothy C. Best

After a nasty case of bankruptcy 3DO has had its assets auctioned off for \$US4.6 (that's about \$AUS7.1 million).

The big ones, Might & Magic and Heroes of Might & Magic went to Ubi Soft for \$US1.3 million, but Namco splashed out the most with the Street Racing Syndicate franchise going for \$US1.52 million.

Even Army Men went for \$US750,000, sold off to Crave Entertainment. Crave must have some pretty stellar ideas to lay out that kind of cash for the digitised little green men.

Microsoft came to the party and coughed up \$US450,000 for High Heat Baseball while motorcycle game Jacked went to JoWood for \$US90,000.

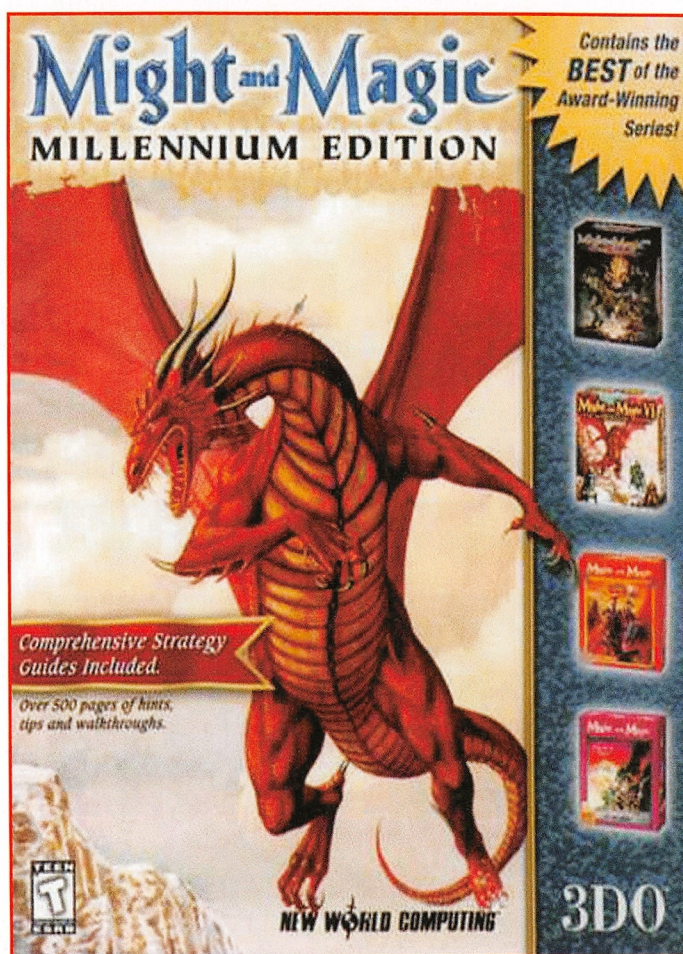
3DO's founder, Trip Hawkins, bought two of the bankrupt company's assets: a backlog of 2001 or earlier games and an Internet patent for selling virtual products online, think digital Pokemon cards, for a cool \$US405,000.

The lawyer in charge of the auction said that it went smoothly but the timing cost them approximately \$US10 million.

While the bankruptcy puts an end to a long-standing developer, at least the fire sale of assets keeps games like Might & Magic going. A folding company can easily gobble up games through hazy ownership or the individual developers not having the cash to get them back off the ground.

A noted omission from the list of sales is 3DO's Four Horsemen of the Apocalypse. It was 3DO's next big thing, featuring the talents of renowned comic artist Simon Bisley, as well as having signed Hollywood talent Tim Curry, Lance Henriksen, Traci Lords and Stan Winston (the Oscar winning effects guy who worked on Aliens, Predator, T2 and Jurassic Park).

I can just see the bold glaring headline in fat type now: "Bankruptcy Averts Apocalypse."



SHOCK AND AWE

Sony vs angry mums

Timothy C. Best

And so it begins. With US forces still struggling against guerrilla attacks and real people experiencing real death in real bomb attacks, the mighty cash-in on the latest Iraq conflict gets under way.

First off has proven a non-starter: Sony announced an online military shooter for PS2 called Shock and Awe only to find itself slammed by consumer groups, angry parents and indignant retired servicemen. Shortly thereafter, the media megacorporation found itself fronting up to a press conference and describing the game as a "regrettable exercise in bad judgement."

Undeterred by Sony's misfortune, new developer Kuma Reality Games is rolling ahead with Kuma War, an FPS described by the company as "fun with a capital F!"

Kuma Reality's pitch is that while most historic conflicts have to wait at least a decade before being turned into games, Kuma's technology allows its designers to "crash" a

game in mere weeks, so even as the turf is regrowing over the unmarked graves of third world civilians, you can be blasting your way through a digital representation of the latest US army SNAFU.

In order to deliver this late-breaking material, the game will have an online subscription service, whereby members will be squirted the latest maps and missions as soon as the developers have finished cobbling them together.

As if that were not enough, the game also promises to use CNN-style FMV mission briefings and real life footage of real death and carnage to set the mood for the simulation.

Meanwhile, the phrase "shock and awe" is having an unforeseen side effect. The US Patent and Trademark office has received 18 applications to trademark those three little words, for products ranging from teriyaki sauce to biros. Expect more games soon.



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GARAGE GAMES

Into the unknown with George Soropos

RACER

Developer: **Ruud Van Gaal** Genre: **RACING** URL: **www.racer.nl**

We head back to northern Europe this month to take a look at a solo effort from the flying Dutchman, Ruud Van Gaal. His game, Racer, has been in development since 2000 and has progressed slowly but surely during the free hours between work and sleep. Currently, Racer consists of a downloadable demo with one track and one car, however, the feature that really sets it apart from similar titles is the inclusion of track and car designing, and testing tools as part of the main download.

These tools have been developed alongside the game and the end result has been enthusiastic support from fans and gamers, and a whole lot of tracks and cars to download from various sites (check the links on Racer's homepage or try www.racer-xtreme.com) The screenshots here were taken from fan-made versions of Monaco, Spa and Le Mans and with fan-made cars: Mercedes CLK, new Mini, Honda S2000, and the default car, a classic Alpine Renault.

Racer is still a way off completion and so a review isn't really fair at this stage, however, we can say the game is complete enough to race around in, has basic multiplayer code working. Also, if you are a keen car designer it offers a perfect framework to design, build and test your cars. In fact, judging by the user comments on the homepage, some tertiary level design schools are already using the program for exactly that purpose. Another unique feature of the game is its support for Matrox's Surround Gaming, meaning that the game can be played with three monitors setup for ultra wide screen action.

The physics is still a bit hairy, particularly during collisions, and control setup is a bit problematic for Logitech wheel users (isn't it always?). However, remembering this is a solo, part-time effort makes

you realise the results are really quite amazing. We had the opportunity to ask Mr Van Gaal a few questions in between hot laps, and being the media slut that all good game developers are, he agreed.

Developer Dialogue

When did you begin the Racer project, and why?

Ruud Van Gaal: I started Racer somewhere in the beginning of 2000. At that time it became apparent that Grand Prix Legends would probably never get a sequel. I enjoyed GPL very much, so I started a small program simulating a simple 2D car with some wheels and Newtonian physics.

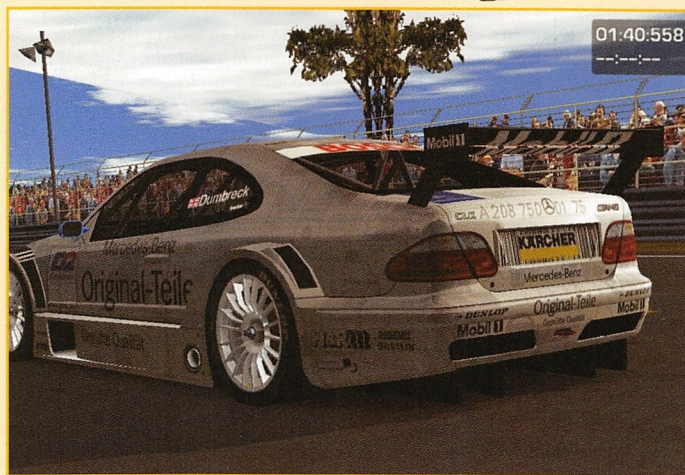
You've done almost all the work alone. Have you considered putting a team together or do you prefer to have control over the project yourself?

RVG: I prefer having control. Firstly, it's fun doing it solo and, secondly, it's not really a matter of getting a game up and running in the least amount of time, so there's no real need for a team. This way, I have full architectural control and can avoid mixing programming styles, as well.

Have you been surprised by the level of support and involvement from gamers in designing tracks and cars for Racer?

RVG: Yes, it's now huge. I did hope some people would create graphics for Racer by making it relatively easy for them using some utilities in the game (for example, TrackEd). Currently, the official Racer forum is so busy I only have time to read tiny bits of it every so often!

What are your plans for Racer's future? For example, do you intend to work more on online



support, or continue developing in different directions?

RVG: I do intend to make something like the Quake system out of it; multiple game servers and an improved networking protocol that can satisfy even relatively slow connections. The direction I'm heading should include multiplayer in order to keep interest in the game, but I also think much of my future work will probably be spent on graphics.

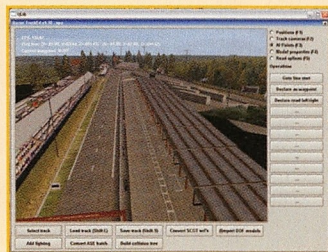
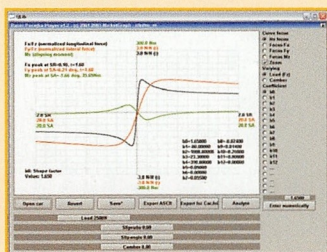
Have you ever considered commercial applications for Racer or have you ever been approached by a publisher to make it into a commercial product?

RVG: Above everything, I want to maintain the freely available version because that way you can do your own product without being driven

by market wishes. There is one commercial product though that's already being built: it's the integration of Racer with high end steering wheel and motion platforms. A lot of work is going into that, but most of its results is also directly beneficial to the freely available version. There are some shots at www.f1simulator.com

Do you have any real life racing experience? What is your favourite real life racing championship (i.e. F1, Porsche Super Cup, WRC)?

RVG: My only RL racing experience is karting, I'm afraid. Still fun, although I don't do it often. It would be nice to be able to race sometimes on Zandvoort in the future. As for the real life racing championship, I'm still mostly with F1!



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HALO TOURNAMENT

Prove you're the real Master Chief

In anticipation for the launch of Halo PC in October this year, Microsoft Games Studios has today laid down the gauntlet to all fragmasters and PC gamers in Australia to register to be part of the biggest online gaming event this year, the Halo PC Online Tournament. Gamers can play to be in the running to win an all expenses paid trip to the US, to take part in the Worldwide Halo Tournament.

Hosted by Cyber Slam, the Halo tournament will launch with a pre-order campaign running across all leading retailers, allowing gamers to pre-order a copy of Halo for PC, and be eligible to register for the Halo Tournament.

Registrations will take place

through www.cyberslam.com.au. Once Halo launches in mid-October, gamers will have two weeks to work on their Halo gameplay before the tournament kicks off beginning of November. Sixteen finalists will be flown from around Australia to compete in the national finals that will take place on 15 November in Sydney. The winner of the national tournament will then be flown to the US, sponsored by AMD, to take part in the international Halo tournament in January 2004.



GOT A SUGGESTION?

If there's an obscure or criminally overlooked gem you think should feature in this column, write in and tell us! In 100 words explain not only why your choice is a worthy game but also offer a possible reason why it was ignored. Send your thoughts to letters@pcpowerplay.com.au with "The Best Game You've Never Played" in the subject line.

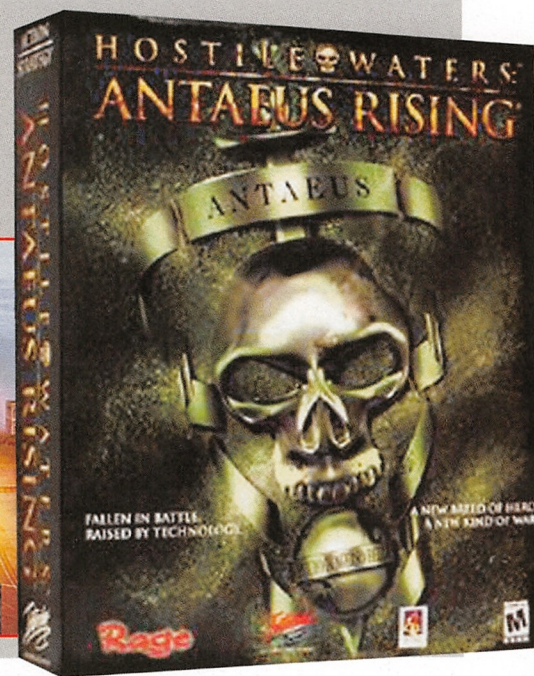
THE BEST GAME YOU'VE NEVER PLAYED

#1 Hostile Waters: Antaeus Rising



When we first thought of doing this column, one title immediately sprung to mind, Interplay's recent but already forgotten game of squad-based vehicular combat. Like every game you'll find featured in this column over the coming months, Hostile Waters was a critical success (91%, PCPP#61) but a dire commercial flop. It's easy to explain why it reviewed so well: the cunning mix of resource management and gripping multi-vehicle action topped with an expertly paced narrative nicked the Battlezone (and before that, Carrier Command) template and reformed it with rare artistry.

Less obvious is the reason why you all ignored it. Perhaps it was publisher Interplay's lack of faith in the title, resulting in a limp marketing push. Perhaps its genre-hopping style confused the narrow-minded. Perhaps it was the generic name and weird subtitle. Whatever the case, Hostile Waters is a gem, undervalued by most, treasured by those in the know.



OzForces [CLA] Alfred



Unlimited isn't Everything.

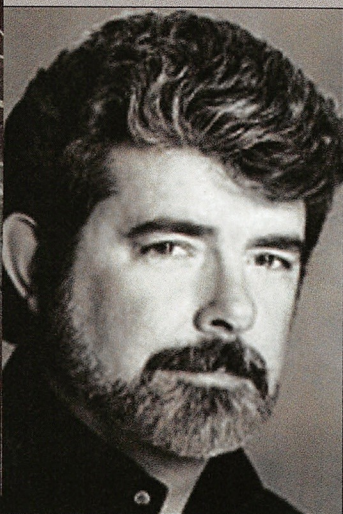
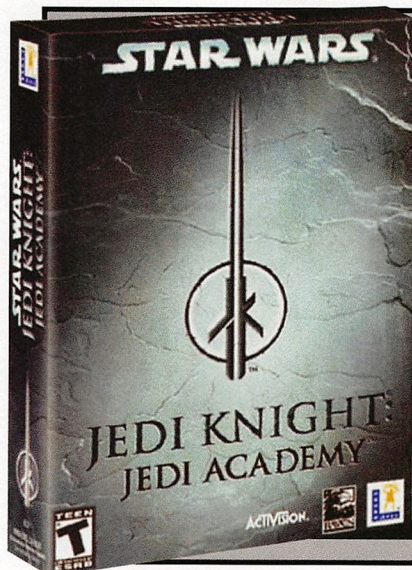
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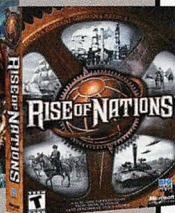
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LOSERS!

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Thanks to Activision, we have four copies of the epic new realtime strategy game, Empires: Dawn of the Modern World, to give away. It's from the team who brought you Empire Earth, headed up by Age of Empires designer, Rick Goodman. If you thought Rise of Nations wasn't epic enough, this is the game for you.

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Q. Why would you fling a dead cow on a catapult?

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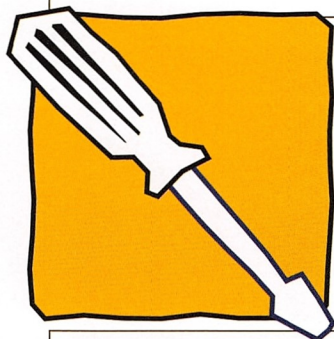
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HOTWARE

All the bits that we cram in at the last moment with Anthony Fordham

DIGN HOME THEATRE CASE

Price: \$595 **Distributor:** PC Case Gear **Contact:** www.pccasegear.com.au



At last we're starting to get somewhere with these things. The quest for the perfect home theatre case has proven difficult, but with the DIGN range we may at last be reaching the end of our journey. At last, a company has been brave enough to say no. No, a 3.5" drive does not belong on the front of a home theatre system. DIGN has also actually bothered to pop down the local hi-fi retailer and note that most high-end DVD players have their drives in the centre of the unit. What's more, the styling of the aluminium fascia makes this thing look damn expensive. Inside though it's all business as normal, with space for full-sized ATX boards. The PSU is a micro-ATX 200W unit, although with just the bare minimum for MP3, DVD and DivX inside, this shouldn't be worrisome.

GODOT MP3 PLAYER

Price: \$139 **Distributor:** mStation **Contact:** www.mstation.com.au



What the hell? An expandable MP3 player for only \$139? What's the catch? The catch of course is that it doesn't come with any memory. This little nugget of fun takes CompactFlash cards, although only Type I, so don't expect blinding speeds. If you're already the proud owner of a few CF cards from flirtations with earlier PDAs or digital cameras, the GODOT therefore becomes a very attractive entry-level machine. If you have to go and buy cards for it, you'll find the total cost of ownership creeping up toward the built-in memory players that are much smaller, except of course this one can have its memory expanding with the flick of an eject button. Also, its connection to the PC is only USB 1.1, so when it comes to transferring whole albums at a time, you will frequently find yourself waiting for Godot.

TAMIYA JUGGERNAUT 2

Price: \$550 **Distributor:** Tamiya **Contact:** www.tamiya.com

After the fall of society all that will remain are our toys, and this one will stand head and shoulders above the rest. For the uninitiated, it's a radio control 4x4 monster truck, the very finest there is, with stupidly large tyres, unreasonably complicated suspension and not one but two high powered electric motors to get the

damn thing moving. The best part? You have to assemble it yourself, open the box and you'll find no less than 26 bags of parts and an instruction manual that would make the decipherers of the Rosetta Stone weep with frustration. But will it go all day, terrorise the cat and ride roughshod over your great aunt's prize winning roses? You bet.

SIEMENS SX1

Price: \$1399 **Distributor:** Siemens **Contact:** my-siemens.com

What do you get when you take a multimedia mobile phone and forcibly mate it with a trilobite? Not much, because trilobites have been extinct for about 500 million years. But if you take a mobile phone and STYLE it after a trilobite, then you get the Siemens SX1.

The company boasts that the unit has the most power and features for a phone this size - it weighs in at only 110g and its much smaller than the similarly specced Nokia 3650. The SX1 has a built-in camera with 4x zoom, can record and play movies, and supports every multimedia messaging format known to yuppies. The only catch is that it's not immediately available here in Australia, although in these days of exciting Internet mail order services, that hardly matters.



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CINEMAWARE

For when you want to
watch instead of play...

Emperor's Club

Distributor: Roadshow **Classification:** PG **Year:** 2002



I thought they'd given up on the idea of *Dead Poet's Society 2*, but then *Emperor's Club* came along filled with clichés and only-in-the-movies moments. Mr. Chips, Mr. Sean McGuire, and Mr. Holland are mashed together to form a rather uninspired all-around good guy. The main role doesn't stretch

Kevin Kline and while you won't quite fall asleep, *Emperor's Club* is little more than a formulaic story about the relationship between student and teacher. Kline's character, schoolteacher William Hundert, sums up the film best as he muses back on his career, "This is a story without surprises." **VM**

Final Destination 2

Distributor: Roadshow **Classification:** M15+ **Year:** 2003



Final Destination wasn't final enough! One year after *Flight 180* crashed killing all, except those loonies who followed a boy with a vision and even they got gobbled up pretty quickly, *FD 2* follows the same premise with loose links to the previous crash. For me, this is just the gore films of old,

sexed up and re-packaged in a glitzy new format. *FD 2* is not a great film but if, like me, you're always the first to stop at a car crash, rail disaster or someone with truly no fashion sense you will be compelled to load up on sugar and laugh along with the gallons of blood and gore. **VM**

Punch-Drunk Love

Distributor: Colombia Tri-Star **Classification:** M15+ **Year:** 2002



To quote our fearless leader, "Happy Gilmore this ain't!" For once Adam Sandler isn't pulling faces, he isn't taunting us with bad voice acting and there is no kid. This is his best performance to date. Sandler plays Barry Egan a man even his family struggle to like, let alone bother to

love. Sandler doesn't play the audience for cheap laughs but jumps between sad and often very disturbing behaviour. This film will leave you with cement in your stomach and a feeling of uneasiness for the rest of your day. So watch it at night, but definitely watch it. **VM**

LOTR: The Two Towers

Distributor: Roadshow **Classification:** M15+ **Year:** 2002



It is beyond pointless to revisit a story that every man and his dog rushed to see on release. *Two Towers* is a far more successful film than its predecessor, as it does what every middle film should. Character and story development and some mighty big weapons aid the film to the

success it rightly deserves, and as long as Legolas keeps squeezing out those cheesy lines I'm sure the third will be just as successful. You will get your money's worth out of this one, as it's packed with more extras than any man can watch in one sitting (I dare you!), this is a great buy. **VM**

Romper Stomper

Distributor: Roadshow **Classification:** R18+ **Year:** 1992



It all came rushing back: Russell Crowe can act! He's just been on a hiatus in Hollywood for so long that us punters struggle hard to remember. Director Geoffrey Wright forces us to confront hatred not through the eyes of illiterate fools but passionate, frustrated youth who yearn for

leadership, which makes the destruction caused that much harder to accept. The gang mentality in the film is all too real resulting in many hard to watch scenes. Bleak from beginning to end, *Romper Stomper* will keep you mesmerised and maybe a little scared of the outside world. **VM**

Solaris

Distributor: 20th Century Fox **Classification:** M15+ **Year:** 2002



This remake of a 70's Russian sci-fi failed to honour its predecessor. No matter how many times they flash Clooney's arse it will never be able to save this film. Five minutes in and I was restless. It wasn't the numerous silent pauses that don't mask anything exciting or deep. Nor

is it that the cinematographer seems to have free reign of the film resulting in extravagant but unnecessary angles. No, it's that the couple, whom take up 90% of the screen time, lack emotion and while the idea is good, nothing gets followed through. **VM**

11'09'01 September 11

Distributor: Magna Pacific **Classification:** M15+ **Year:** 2002



Eleven acclaimed filmmakers, from eleven different countries, were invited to make a short film of 11 minutes, nine seconds and one frame in length. From my experience, this is close to impossible but all directors successfully completed works that expressed 'a' story from September 11. It is hard to pass

judgement on a DVD with such an emotional topic. Some may see this collection of short films as exploitation of other people's suffering, while others may see it as a celebration of those who survived. Personally, it was worth experiencing the journey even if it is one I may choose not to repeat. **VM**

England 1 Australia 3

Distributor: Roadshow **Classification:** G **Year:** 2002



Just to round off the month's bleak reviews is a victory and a brief reminder of what should be. Ah! To remember this day a fresh again! I remember the brief plan for the Next gamers to meet at 6:00am before everyone piked, calling in late to work because the game was delayed

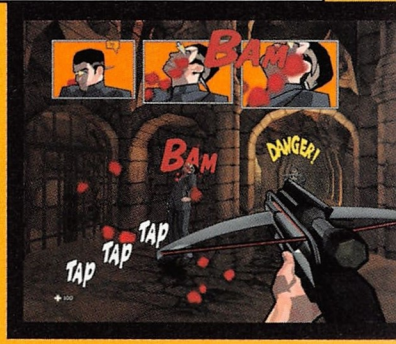
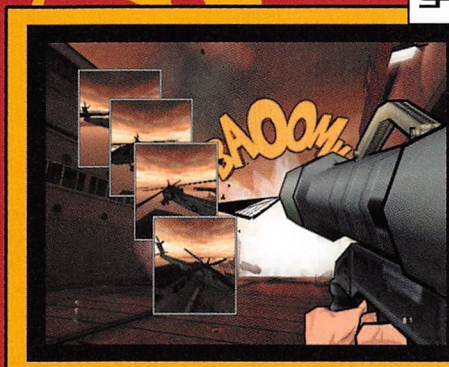
due to a bomb scare, but most importantly was the reward of being able to rub the victory in every Pom's face for months. So, would Soccer Australia pull their finger out and let's kick some more butt! BTW it's a great DVD containing the full match and post-match interviews. **VM**

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OUT TO PLAY: Timothy C. Best



Mad Scientist in a Box

A few months ago I wrote a column called Create or Capture. It's all about scanning and inventing, making out together in the back seat of the Matrix and where that would lead nine months down the track. Now, I want to get a little European and add Generate to the mix. To get the back seat really rocking we need Capture, Create and Generate.

With Generate, we can do something really magical. We can explore the unimaginable.

Aliens are a good example of the unimaginable. Let's see what we've managed to come up with in our long and proud sci-fi tradition. We have guys with crinkly foreheads. We have creatures with exaggerated features like big heads and spindly limbs (yes, I know those ones are real, so don't write in and complain) and at the top end of the scale we have Giger's Alien which Species to Silent Hill have leant on for inspiration.

The problem with whipping up these creatures is that the very nature of something alien is that it is outside of our experience. How can we capture or create something that, by definition, we've never met and is more than just a composite of imaginings we already have?

Therein lies the rub, my friends.

Torsten Reil was at Oxford University in the Zoology department studying human motion with animation. What he came up with prompted this column because it could have lasting effects on game development.

Reil's research involved creating a computer model of a person based on anthropometric data including joint limitations, physical dimensions and weight. He then added a muscle structure and neural networks to control them. What he couldn't do was teach the neural networks to walk... this, they'd have to learn for themselves.

The process involved generating a hundred random configurations for muscle control and then seeing what motion they produced. The configurations that managed the most steps were bred together. Random variations (mutations) were also added and trialled to strengthen the gene pool. Over dozens of generations and thousands of configurations later, our virtual friend learnt to walk.

The whole process mirrors a toddler's first steps. The little dude has no ability in calculating the physics behind the act, such as vector forces from his muscles,

centre of gravity and friction, but, nonetheless, trial and error leads to a pudgy waddle.

An unexpected side effect of the search for a walking configuration was that crawling and recognisable handspring acrobatics also emerged.

The handspring is hardly undiscovered country, but imagine what this could mean for something a little more exotic.

We've all seen shows like the Tripods with dodgy War of the World rip-offs, but how would a giant stilt-walker like that really move?

Genetic algorithms like Reil's could not only tell us, but they could give us options. Maybe they wouldn't be so slow and methodical, maybe they would be able to skip along or they would use a painfully twisted limping hop.

Now think of the weirdest alien design you've seen... perhaps it wouldn't do the alien shamble or motion-captured run we've all come to know and love; maybe the dangling limbs would work better in some form of twisting somersaults or disturbing side-winding whip-action and, as we all know, a motion can totally define a creature. Just think what Terminator 2 did to Robert Patrick's subtle limp.

What's more, generating animations like this, based on a physics engine also means your creature is acting like a physics object with real game force

already working on it.

Stilt walkers would sway realistically and move through phases of having little and then greater stability. Maybe you could build gameplay into this with a push at just the right time, which could work wonders.

With enough computing power you could even have it run on the fly. Creatures could learn to move taking into account the location damage you had just created.

Of course, there are also more mundane applications, like having a computer handle the time consuming job of giving every creature and character in a game a unique way of moving based on its size and strength. Think of the time you'd save and how many more details an animator could then focus on.

Now, if all of this sounds too far fetched, I should fill you in on what Reil has been up to since his stint in the zoology department. Using the fruits of his research he has developed a piece of animation software called Endorphin that lets you motion capture a virtual stuntman. Our little man has learnt to run, balance, jump, fall and so very much more. Reil claims that his characters can evolve behaviour to react to the world and forces around. A figure walking over a swaying bridge will automatically counter the motion, for example, or that a model will fall differently every time he is tackled and

sometimes even cling to the tackler.

Consider it rag-doll physics for the living. These digital stuntmen can take hits that even Jackie Chan would run screaming from, and even losing limbs won't shake their professionalism. While Endorphin has been designed with people in mind, the website claims that it'll work for animals, dinosaurs and even custom aliens (now, that's what I'm talking about).

To lend credence to the technology, this virtual stuntman is going to get his first big screen gig in the Warner Brothers epic, Troy, starring along side Brad Pitt. Furthermore, Reil's technology has already appeared in the video clip for Jurgen Vries' new song, The Wilderness, which was produced by Sony UK. Apparently, turnaround times for the animation rocked as well.

What makes this all the more impressive is that even Reil admits he isn't exactly sure how his little stuntmen work. Sure, he knows all about the evolutionary processes but the brain structures that have developed are beyond him... they are simply too complex to be understood by mere mortals.

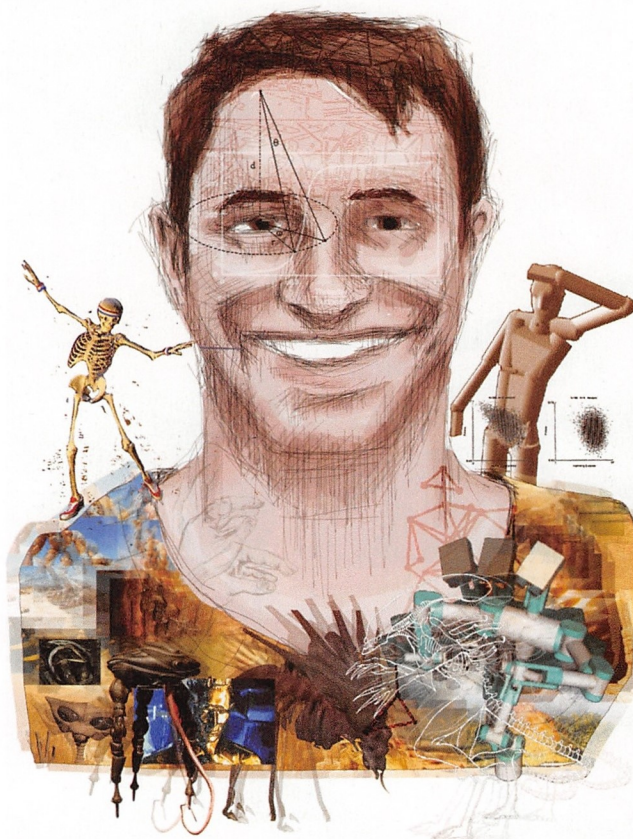
What if we turned Endorphin's capabilities on its head? What if we made a basic key-frame animation - with no consideration for things like balance and centre of gravity - and then we set a modelling program to design a creature to move a certain way?

We could specify things like range of motion for joints, maximum individual muscle strength, that it needs to fit through doors, is able to generate this attack force and run at that speed. We could grow creatures based on their function in the game. We could grow creatures that were previously unimaginable.

Our mad scientist in a beige box can keep track of a number of variables that would cause a human's conscious brain to check out of Hotel de Rationality and, more importantly, it isn't bound by the restrictions of the fear of embarrassment, preconceptions or prejudice.

Left to itself, the computer isn't likely to produce perfect gaming gold, but that's where the art people with funny-coloured hair come in with Create on one arm and Capture on the other.

While the scientists usually get to see the alien first, it's the artists that take everyone else along for the ride.



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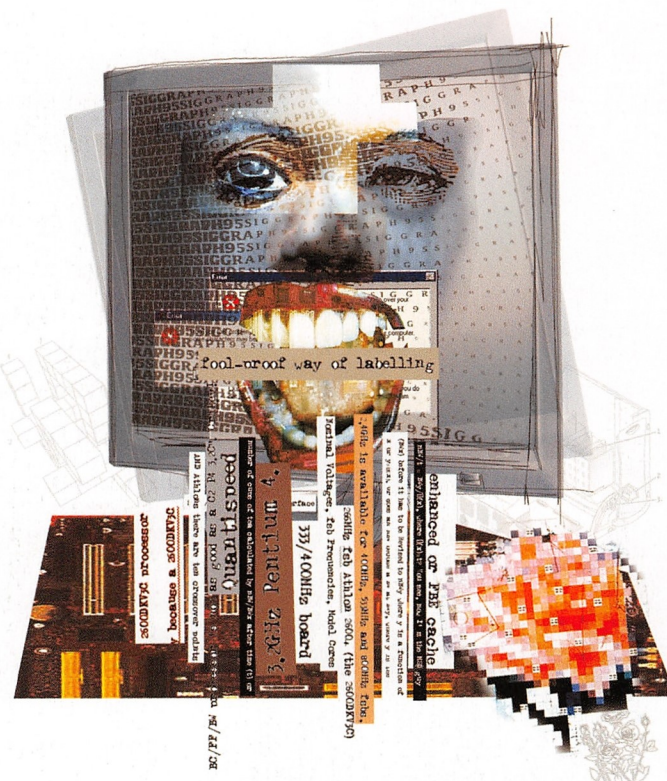


TECH TALK: Stuart Calvin

A Rose By Any Other Name...

This month, in a SetUp inquiry, Jasper Nunn-Parker wanted to know (yes, that's you, Jasper) if he could run an Athlon 2600+ on his 200/266MHz frontside bus motherboard. He didn't have the standard 333MHz fsb option he thought he 'needed' and was worried about using a BIOS overclock feature that did provide a 333MHz fsb, of sorts. That sounds like public beta testing to me; you know, what you did for Microsoft with Windows XP day to day before Service Pack 1 was available. Could Jasper have avoided the anxiety of overclocking if CPU nomenclature (I love that word) were more revealing or just plain and simple? How many readers realise there are three very different Athlon XP 2600+ processors? Two are Thoroughbreds, one version runs at 2133MHz on a 266MHz fsb but another, later model needs to suck off 333MHz for 2083MHz. The Barton core 2600+ also needs a 333MHz fsb. The Athlon 3000+ performs a similar trick across the 333MHz and 400MHz fsbs. Does Intel have a CPU speed crossover on the fsb? They sure do, and they don't hold back - the 2.4GHz is available for 400MHz, 533MHz and 800MHz fsbs, but one must know their ABCs. Why? Apart from system compatibility issues, the 2.40C for example, will run at 3GIG, my friends: get some. But talking about Intel nomenclature is pretty boring as Bennett and David have tried to tell me in as many different polite ways as there are mobile processors (that is, LOTS). If I, on the other hand, fall asleep reading Attachment 1 to Enclosure 10 to Appendix AA in Annex Z (on page 1087) of an Intel Technical Document, I don't really care because the wife just covers me with newspaper and goes back to bed. Blathering on about Quantispeed is much more jolly interesting because it's bloody easy to buy the wrong CPU for your motherboard.

Will Jasper be able to source a 266MHz fsb Athlon 2600+ (the 2600DKV3C) and top-out his current board. Or, should he invest in a 333/400MHz board that permits him to currently scale all the way to 3200+ and further as spring returns? Another freelancer for this magazine has the



exactly the same problem and is discovering that this 2600DKV3C processor is quite rare, so rare, he can't find one. 'Tis a pity because a 2600DKV3C is good for another few years at least and will eventually make an excellent multimedia server. Provided, that is, the video adaptor can bestow the grunt and the soundcard (or better still an MPEG decoder), can output through a Sony/Philips Digital Interface to the AV. Where are these 2600DKV3C processors? Yoo-hoo... calling all distributors and retailers... wanna make a buck!

The AMD Quantispeed rating was all well and good but real world tests at the top end of town, around the 3200+ mark, is where the Quantispeed rating completely loses the plot. Without something approaching a quantum leap in on-die code 'smarts', there is no way that a 3200+ performs anything, anywhere, anytime like a 3.2GHz Pentium 4. Full stop. Sue me. Unless, of course, the 3200+ is pumped on a 1000MHz fsb and supercooled with liquid hydrogen in a vacuum whilst approaching the speed of light. The 3200+ is a Model 10 Barton, as smart PCPP shoppers would know. One of the 2600+ processors is also a Barton and the other two are Model 8 Thoroughbreds, OK, got that? The fastest Model 6 (Palomino) is the 2100+ running at 1733MHz back when the whole 'XP plus' thing still made a

bit of sense. The Palominos got their thrills on 266MHz with 1.75V and they all got shitty at 90 C. Six, eight, ten - where are the odd-numbered chips?

Of the 15 AMD Athlons there are ten crossover points where one Quantispeed rating is shared across different fsb speeds, Nominal Voltages, fsb Frequencies, Model Cores or a combination of two or more specs. If that made your eyes glaze over, develop a Western Front thousand-yard stare or make a snapping noise in your brain, let me explain. The only unique Athlon XP Models are the 1500+, 2500+, 2700+, 2800+ and the 3200+ processors, that is aside from Model Revisions, or 'steppings' in Intel language. Things like "Real Mode RDPMC with Illegal ECX May Cause Unpredictable Operation", which are found in A0 and B0 Athlon Model 8 Revisions, don't count apparently. There's no fix planned but the good news is that the workaround is simple enough: "When in real mode, restrict use of the RDPMC instruction to legal counter values (0-3)". This has nothing to do with my gripe but I felt important for a nanosecond.

I have an idea about how ratings should be. A processor with little or no cache will last on the market about as long as a blind man facing Glen McGrath with the new ball on a greasy Gabba wicket. So you gotta have a cache and it's gotta be big

because 256KB is so blasé, sooo Redfern. Alright then, 512KB is now Big Cache or BC. A Megabyte of cache is simply called MC for a "meg of cache". Anything over MC is FB and FE (FB/FE) or just Frickin Big and Expensive (FBE). The cost of Static RAM at those sizes is reserved for [h]ard[k]ore geeks worrying about frame rates at 'only' 600 in the middle of UT2K3 Torture Test at 1600x1200. Then there's temperature: can it boil water (BW) or Not Boil Water (nBW)? How many times can a BW actually Boil Water (BWx) before it has to be Revised to nBW where y is a function of x or y = (x). Or does an nBW become a BW at BWy, where y is the number of cups of tea calculated by nBW/BWx after time (t) or nBW/t = BWy/(x), where (x)=t? You see, now I'm the MSU guy (Making Shit Up) in the lab and I know that you consumers don't care for this crap. So I turn my nBW and BWy into monikers like PDQ! (Pretty Darn Quick!) and PFF! (Pretty Frickin Fast!), pretty neat, huh?! This is the PD/PF range of processors with BC or MC. Then there's the range of processors that just keep getting better. These have the letter C, a habit borrowed from Intel, that means Crikey! I can only imagine Intel's B range are Bitches and the A's are just Assholes. The Crikeys! are the crippled version of the HS range or Holy Shit! The HS range are also Hot Stuff because they have an enhanced or FBE cache and they are Very Fast or VF. So fast in fact, that these puppies will be nicknamed FF, because I'm a beach-cool, groovy sort of PR dork, as well. Seriously, although this is all just x86 architecture and apples should be apples, nothing is truly open source. Which is why we hear about optimised(tm) this(c) and that(r). Intel probably laugh at us anyway because raw Megahertz may be a dumb way of labelling processors after all. Nobody, including AMD, has worked out a slick, fool-proof way of labelling the models. Maybe, maybe I say, AMD should just stick to Megahertz because soon, we'd be used to hearing, "Hey! I hear that AMD 2200HS BC/FF/BW processor is not as good as a C2 P4 3.2C". Crikey!

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THE GUERRILLA GAMER



On The Level

Am I a bad person? No, don't answer yet, let me give you some context. Am I a bad person because, after having played a high-action bloodletting extravaganza - such as the upcoming Half-Life 2: When Grungy Old Mattresses Float - for about half an hour I want to see some kind of screen pop up and tell me how my performance compares to some ideal performance pre-programmed into the game? Am I a SICK PUPPY for wanting to glory in the fact that I beat par time, or got 98% of the kills or found 4/5 secret areas? Is that so wrong?

I'm talking about levels of course. Not the nerdy, creepy slightly damp D&D style levels like in NWN where you end up actively trying to avoid getting more experience so you don't have to level up and be expected to choose from a list of ten thousand new feats, none of which you understand. I'm talking about the old fashioned kind of levels, like in Space Invaders. Except in Space Invaders they were called Waves. And in Gyrus they were called Warps.

The point is the game was broken up into easily digestible chunks and even after a marathon session you knew exactly where you were - 18 million points behind your no-good-buck-toothed cousin whom nobody in the family liked anyway. So you broke back into the milk bar after dark and pulled the plug on the machine, resetting the leaderboard. Or maybe that was just me. In any case, nowadays, after about sixteen minutes in Half-Life or perhaps Clive Barker's Undying everything just seems to blur together into an endless, occasionally twisting corridor filled with identical monsters. The textures on the wall may change, but the game remains the same.

For me, the concept of the level reached its pinnacle with Doom and Quake. I know I spent last month's column screaming about how id Software aren't all that, but when it came to levels, these guys knew their shit. They knew their games needed to track how many kills the player had made, how many secrets they had found, and how many guns, ammo, keys and other miscellany they managed to pick up. And it was all

summarised on a little intermission screen, along with a total time and a par time for the level.

The first time I played Doom I actually felt a stab of guilt because my time was more than eleven minutes over par - mostly due to me wandering around the map blowing up barrels and giggling because I had never thought gaming could be like this. But when that PAR:30 sign came up I felt guilty. I felt like I had wasted some of the game's valuable time. I thought I was missing out by not getting to The Hangar quickly enough. So I rushed into the main area on E1M2 and immediately got shotgunned to bits by Sergeants.

Nowadays, of course, it's all about having some kind of interactive movie experience. I have to be some kind of character. I have to have a back story. I have to have, dare I say it, context. The interface has to be unobtrusive. The game has to pretend, bizarrely enough, not to be a game.

Half-Life is probably the worst offender, and from what I've seen of it so far, the sequel looks to be the same. During the whole Half-Life experience,

I had no idea how I was performing, where I was up to in the game, or how much of the game I was missing. Or even if I was missing any of it.

Without defined start and stop points, there was no anticipation of cool new stuff and gameplay experiences. Especially in the middle, heavily industrial part of the game, I just found myself running through corroded corridors and climbing endless identical ladders with no idea of how long I'd been in there or when I could expect to get the hell out.

Indeed, I spent most of Half-Life thinking, "This Black Mesa place is cool, but I wonder when I'll get to move on to the next location?" At no point was I given some kind of broad overview of the whole game, or an indication of how far I'd progressed into it.

Okay, so some of you will be jeering at this little pet hate of mine, thinking that the concept of the level is outdated, something we old fogies hanker after, you know, those of us who've been in the industry since the prehistoric days of 1993 and still think not having to press the Turbo button on the front of the PC to

play games is a pretty neat idea.

Somewhere, someone told game developers that the industry now makes more money than the Hollywood box office (at least, it does if you only count the US box office and fudge the figures a bit), but instead of hearing that, they heard "game development is exactly like Hollywood so you should go and make big budget Hollywood films mashed inexpertly into a gaming package." It was that kind of thinking that brought us the Daedalus Encounter - starring Tia Carrere.

I say games should be proud to be games. Some games have got it right - look at Neverwinter Nights. I whinged about the over-complicated feats system at the beginning of this column, but as a whole the game is proud to acknowledge its tabletop roots - it even tells you it's rolling 1D6 to check for willpower when zombies jump out at you.

I, for one, welcome the fact that people like Chris Roberts seem to have faded away into the background in recent years. After Wing Commander 3 that guy thought he was a big time director, and he stopped making games and started making really bad sci-fi movies starring Mark Hamill and a series of progressively less convincing novelty cat puppets. Freelancer may have been disappointing, but at least it didn't subject us to six hours of Malcolm McDowell doing a Saddam impersonation and ranting about a space-based version of the supergun (remember THAT one, folks?).

Although, on the other hand it never told me "Only Three More Warps Until Earth - You Have Destroyed 86% of Pirates. 8/11 Secret Asteroids Discovered." Hmm...

The Guerrilla Gamer is a veteran PC games journalist who doesn't really understand the concept of sub-editing. He seems to take every tiny change we make to his work as a vicious personal attack, even if we're merely redistributing commas. He also sweats a lot, which is kind of creepy in a guy that thin.



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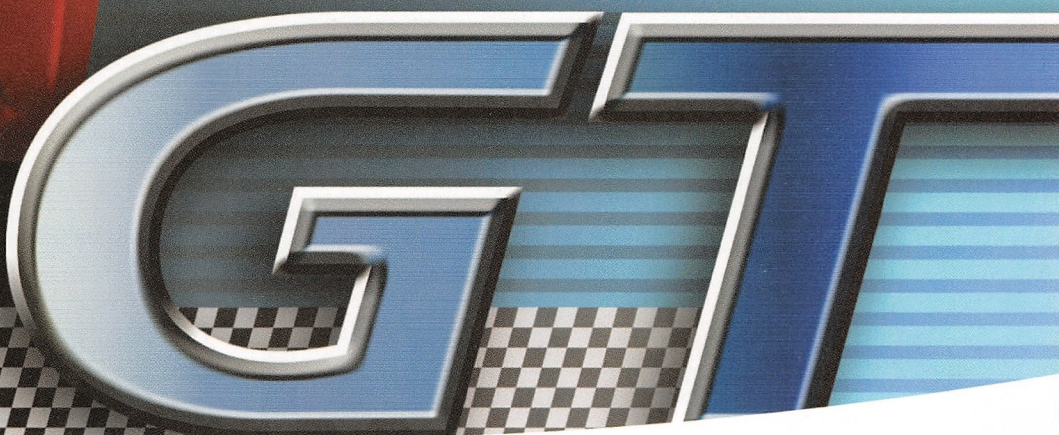
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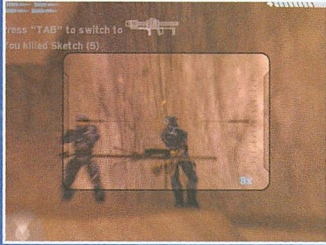
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Halo

It's Halo. But on PC. 'Nuff said. **Bennett Ring** has played it. Here's his thoughts so far...

Saying that HALO sold well on the Xbox is like saying Windows has done ok on the PC. It's the number one selling game for the Xbox, with over three million copies keeping gamer's thumbs nice and sore.

Originally slated as a PC release, Microsoft pissed off millions of PC owners by making it an Xbox exclusive, but now HALO has come full circle and is about to be released on the PC. The guys tasked with bringing HALO to the PC are GearBox software, and it was with great pleasure that we visited their headquarters in Dallas, Texas. Well, great pleasure and about 17 hours cooped up in a pressurised metal tube at 30,000 feet, overdosing on sleeping pills to get through the mammoth flight.

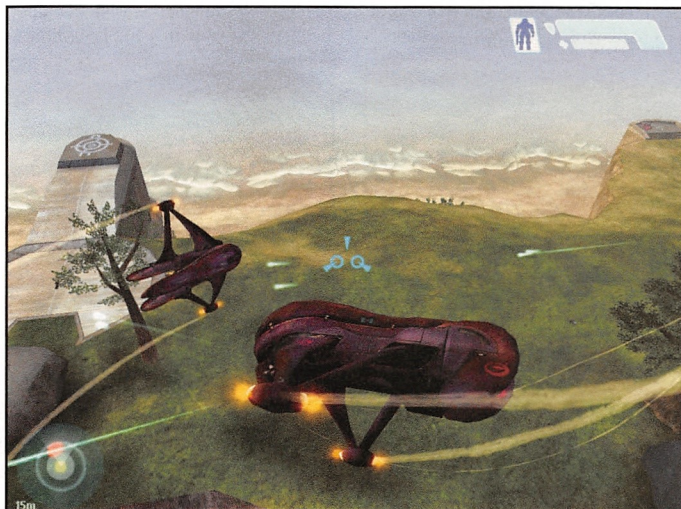
After acclimatising to the 36C summer heat, we made our way over to the GearBox offices with an assortment of international journalists. After a very brief tour of the GearBox, where we marvelled at the massive stockpile of junkfood in the store room, and the high tech automatic coffee machine that looked as if it belonged in the Space Shuttle, we were ushered into a small presentation room. The projector was fired up, and there was HALO in all its high resolution glory.

GearBox hasn't changed any of the storyline of HALO, so this game plays identically to

the Xbox version. The only major change within the single player game is the removal of the auto-aim feature that was necessary to accommodate the Xbox controller. GearBox were a little worried that the increased accuracy of the mouse/keyboard combo over the Xbox controller would make HALO a walk in the park, but we can happily say this isn't the case; you're still gonna get butt probed by the Revenant if you try this game on some of the higher difficulty levels.

Perhaps the biggest difference is in the graphics, specifically the ability to play at much higher resolutions. If you've got the hardware, you'll be able to crank up the resolution to 1600 x

1200, and at this resolution HALO is very pretty indeed. The heavy use of bump mapping and pixel shaders is much more obvious at the higher resolutions... but it comes at a price. We tried a late beta of the game, and it brought our RADEON 9800



Developer: **Gearbox** Publisher: **Microsoft** Distributor: **Microsoft** Due: **Late October**



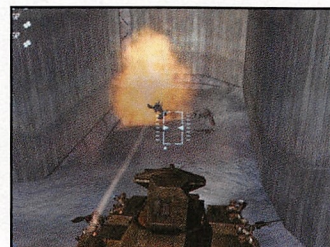
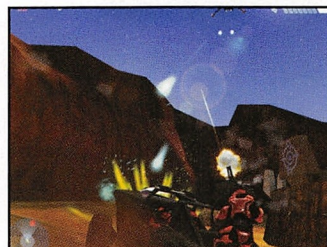
PRO/3.3GHz Pentium 4 to its knees.

Considering HALO has been ported from the vastly inferior Xbox, and has very low polygon environments compared to many cutting edge PC games, we were expecting silky smooth frame rates, but to our dismay watched as the frame rates plummeted into the high teens during scenes that made heavy use of bump mapping. And this was at a resolution of 1024 x 768! However,



we can't make a final judgement on the frame rates until we see final code - hopefully these will be smoothed out before the game is released.

While the singleplayer hasn't been touched, multiplayer has had a massive shot in the arm, with up to 16 players now able to duke it out over the Net. When we asked about the low player limit, the developers claimed that this was due to the original maps being designed with a 16 player limit



in mind. Unfortunately this excuse doesn't really hold up when you consider there are six new multiplayer maps for the PC version, suggesting to us that getting HALO to work smoothly online has been a bit of a drama.

We were given the chance to play HALO over a LAN with around 9 other players, and as someone who cringes at the mention of the words "split screen", playing multiplayer HALO with an entire screen to myself was an attractive proposition. And while there's no denying that HALO over the LAN was fun, I couldn't help but feel that HALO doesn't really have much new to offer gamers. Sure, it's got vehicles, but only a handful at most, which compares unfavourably with the current ruler of the online roost, BF1942. For pure infantry action, the 16 player limit leads to



very small games, lacking the epic scale of games such as Enemy Territory. And to round it off, lag problems such as vehicles warping all over the place and seemingly inaccurate bullet detection were present, something that is inexcusable over a LAN with only ten players. Again, GearBox emphasised how hard they're working on the netcode, so hopefully these issues will be remedied in the final version.

There's no doubt that HALO is going to do well on the PC. However, for those of you who played it on the Xbox, chances are it's going to feel like you've seen it all before. But if you haven't played HALO before, the solid single player game should keep you entertained until Half Life 2 is released...

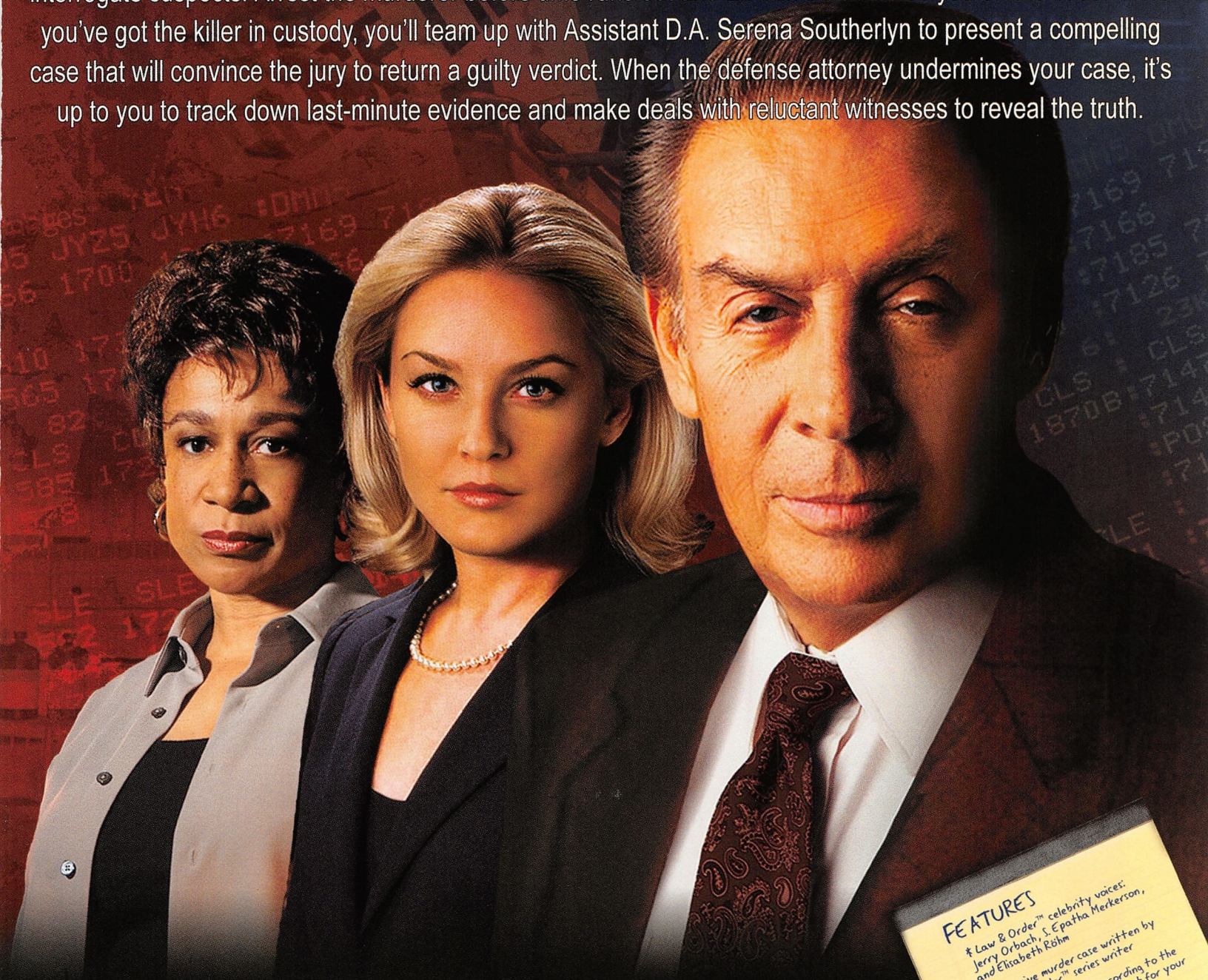


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REFRESH

A month's a long time in gaming. However, it doesn't mean every imminent title gets finished. Here's some that aren't quite done yet...

Chrome

Developer: Techland ■ Publisher: Techland ■ Distributor: Take2 ■ Due: Late September

Dare we say this is looking polished?

They say that imitation is the sincerest form of flattery. If this is indeed the case, then Deus Ex (and the System Shock games before it) should feel very flattered as our early preview code of Chrome plays like a far more action packed (and far better looking) version of the aforementioned games. This is neither a bad thing nor an attempt to belittle the developers of Chrome - there's nothing at all wrong with taking an established formula and building on it.

The mission we were able to play amply demonstrated both the graphics engine and the mechanics of the game, both of which we're happy to say are really quite good. The mission saw us approaching a secure facility through some nicely rendered forest, liberally peppered with enemy soldiers. Taking care of the soldiers was a bit more difficult than it initially looked because

the little buggers had the disconcerting habit of hiding, taking cover and trying to flank us. Once we were closer to the facility, we had the chance to try out our hands at sniping, a few drivable vehicles and hacking. Unfortunately, only two of the much-vaunted Implants were available to use in the demo - Armour and Accuracy - but they did give us a good indication of how they will affect gameplay. Implants can only be used for a limited time before they run out of energy but all reports say that effective management of said implants will be vital as many of the enemies are equipped with implants as well, making them far tougher than the average grunt and capable of taking tactical advantage of their special powers. Despite the imminent release date leaving little time to polish this code, Chrome still looks like it will be a very solid and varied shooter.



Warlords 4: Heroes of Etheria

Developer: Infinite ■ Publisher: Ubi Soft ■ Distributor: Ubi Soft ■ Due: Q4 2003

Wage war the polite way

Whilst most strategy games have made the transition to either realtime play or realtime 3D, it's somewhat reassuring to see the venerable Warlords series still battling away on its two-dimensional battlefield and politely allowing each warring side to plan their next foray in turns. Testing the preview code of Heroes of Etheria is akin to snuggling into bed to re-read your favourite book. It's something of a surprise to not have to open a DOS window in order to load it up.

To newcomers weaned on Total War and Age of Empires, Warlords 4 may seem anachronistic. Indeed, initial impressions serve to highlight a seemingly lightweight approach to

strategic manoeuvrings. You can't build structures within a town - they're only there to produce more troops and generate extra gold. Resource management follows the Kohan route in that supply and upkeep are all that matters. Combat, too, is decidedly simple. You select troops one at a time to face off against your opponent, whilst casting the occasional magic spell. It's essentially rock-paper-scissors, but with animated blood.

Hopefully, further prolonged play will reveal hitherto unseen depth, especially with regard to the tactics of battle. Right now, though, this is unlikely to challenge the likes of Kohan or HOMM4 for genre supremacy.



To newcomers weaned on Total War and Age of Empires, this may seem anachronistic... hopefully further prolonged play will reveal unseen depth

XIII

Developer: Dargaud ■ Publisher: Ubi Soft ■ Distributor: Ubi Soft ■ Due: Late October

A new kind of frame-rate



Firstperson shooters rarely carry much style. In the race for photo-realism, the FPS has always been at the head of the pack. But, thankfully, you can always rely on the French to do things... differently.

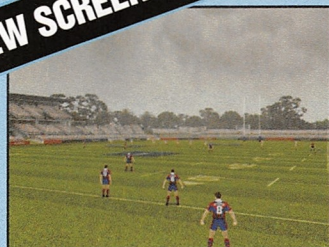
XIII is a graphic novel in videogame guise. Its environments are shaded flat rather than authentically textured; its characters are 3D models pretending to be cardboard cut-outs; sound effects are given a visual presence thanks to the comical "Tap! Tap! Tap!" of an enemy's footsteps or the "Rat-a-tat-tat!" of your assault rifle; everything sports cool

black outlines on their extremities. It is undeniably sumptuous.

Best of all, key incidents such as a headshot or an in-game cut-scene are frequently illustrated in close-up by a three-frame comic strip in the corner of the screen. While at heart XIII is a traditional run-and-gun shooter, its irreverent and stylish presentation does well to reinvigorate a tired formula.

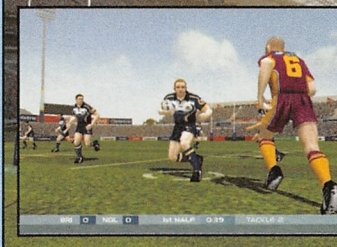
The aesthetic, humour and weapon choice point towards an experience similar to No One Lives Forever, which cannot possibly be a bad thing. All in all, it's shaping up rather well.

NEW SCREENS!



RUGBY LEAGUE

Developer: Sidhe Interactive
Publisher: Tru Blu Entertainment
Distributor: HES Interactive
Due: Mid October



Space Colony

Developer: FireFly ■ Publisher: Gathering ■ Distributor: Take Two Interactive ■ Due: Early October

Yes, it's the Sims in space

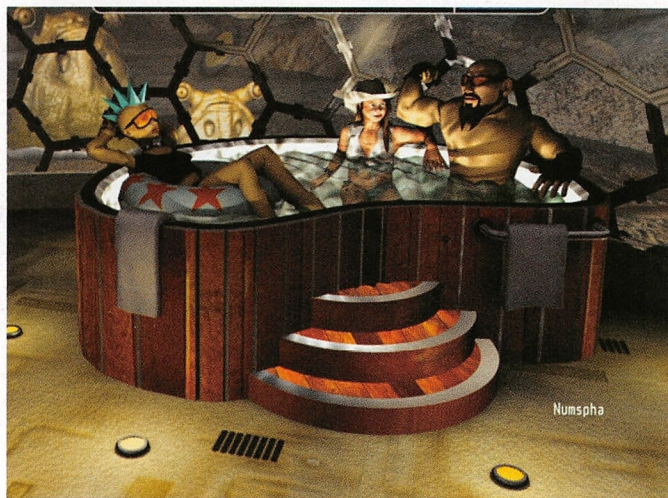
Combine "house mate hell" with "in space no-one can hear you scream" and you're starting to understand the Space Colony twist. Players have to build a thriving complex (either SimCity-style, complete with space tourists and alien attacks, or following the campaign) and then run it using Sim-style characters.

The twist is that each of these little characters has enough baggage to supply the New Price is Right for years. Boot scooting Tami, for example, craves human attention but she's about as pleasant a rattlesnake and twice as quick to anger. Stereotypes like the blonde bimbo, mad scientist, hill-billy, hippy and even a pair of Japanese cyber punks

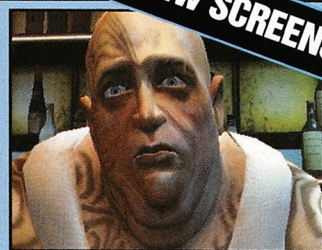
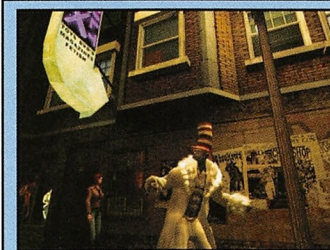
all mix it up in confined spaces.

These characters, plus the tongue in cheek setting – the campaign has you working for Black Water Industries "A company that partially cares" – have more than enough personality for one game. In fact, our main fear is that it might all get too much after a while, but we suspect that sending the most annoying colonists on suicide missions and then replacing them with robots will prove highly therapeutic.

Finally, while the graphics are micron dated, and playing can be annoyingly fiddly while you get your strategy straight, the construction and character combo actually gels. We'll see how it goes on long-term appeal in a month or so.

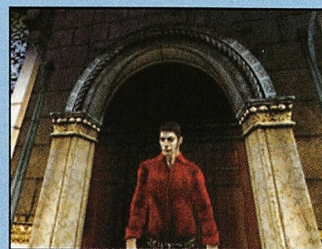
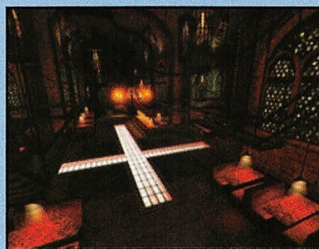
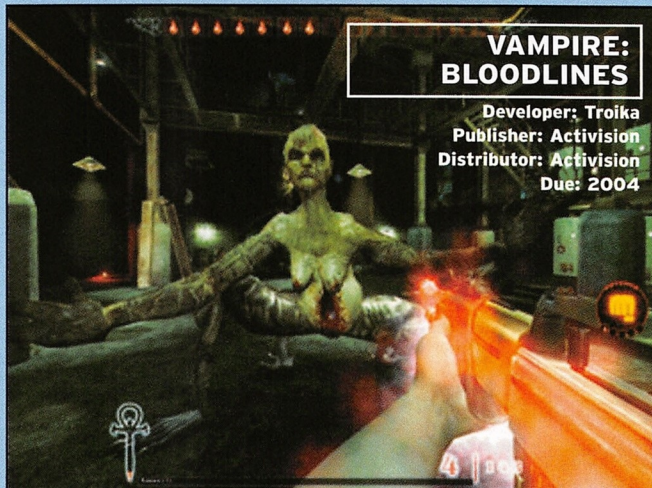


NEW SCREENS!



VAMPIRE: BLOODLINES

Developer: Troika
Publisher: Activision
Distributor: Activision
Due: 2004



Conflict Desert Storm 2

Developer: Pivotal Games ■ Publisher: SCI ■ Distributor: Atari ■ Due: Late October

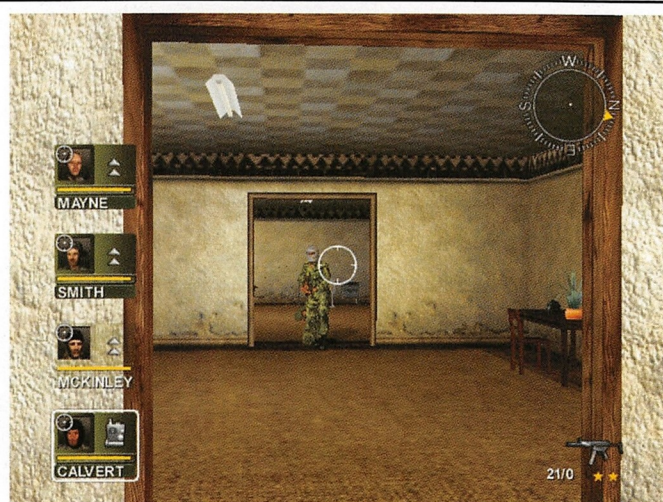
Back to Baghdad...

While arguably lacking sensitivity, the first Desert Storm was a cracking squad-based shooter, only let down by a mediocre port from its console origins. This sequel looks set to follow the same path, with development once again leading on the various console formats. As such, PC gamers can expect a solidly playable experience, albeit hindered at times by an unwieldy interface and a graphics engine that is decidedly uncutting-edge.

The play mechanics feel similar, with the same console-friendly third-person perspective at work. You can switch to first-person, but it feels a

little clumsy compared to a genuine FPS. Your squad of four troops, whether British or American special ops, retain their specialist abilities – the sniper, the demolitions guy, the heavy weapons dude, and the all-rounder. Commands are uncomplicated – follow me, stay, cover me, etc – but the AI of your squad appears to cope quite well, thus eliminating the need to baby-sit each troop every inch of the way.

Considering this sequel has been turned around in the space of twelve months, it's unrealistic to expect anything other than a refinement of the original template. Next month's review will reveal if that's enough incentive to purchase.



NEW SCREENS!



ONE MUST FALL: BATTLEFIELDS

Developer: Diversions
Publisher: TBC
Distributor: TBC
Due: Late 2003

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Call of Duty

Yet another WW2 military shooter? Far from it actually. **Daniel Wilks** talks to Infinity Ward about the true sequel to *Allied Assault*.

To be brutally honest, when our fearless leader, David, or "The Goose" as we like to call him, asked me if I would like to do a preview and interview Grant Collier, the producer for the upcoming WW2 shooter, *Call of Duty*, I was uninterested to say the least. As soon as I heard there was yet another WW2-based shooter coming out, I started hoping under my breath that something would happen between North Korea and the US, just so developers would have another conflict to base games on. Of course, I agreed to do the interview because I'm a whore and I love money. My heart really wasn't into it but come the day of the interview I put on my game face (somewhere between my come hither look and my "touch me and lose a finger" scowl) and hopped a cab. If I wasn't in the mood before the cab drive I certainly wasn't after it took 45 minutes to go from Redfern to The Rocks (maybe 10km) because the cab

driver didn't know where The Rocks was. Finally, I got to the hotel, determined to salvage the day. I rushed upstairs to the conference room only to find out I'd gotten the days wrong and the interview was actually scheduled for the following day. Expletives ensued.

When the next day rolled around my mood had, if anything, gotten worse - back problems had robbed me of a night of sleep and the cat was being a tool. Once again, I hopped a cab and set out for Shangri-La - the hotel, not the fabled paradise (mores the pity). Again, I was late, but luckily the TV crew interviewing the dev team was taking their sweet time breaking down their equipment so in the grand scheme of things I was early. Finally, I can get face to face with Grant Collier, the founder of Infinity Ward, the team developing *Call of Duty* for Activision. Grant welcomed me with a hearty

handshake and apology for being late and I found my mood improving. I began to put myself at ease in preparation for grilling the witness. I let my guard down. It was then that things got a whole lot worse. He called me Danny. Not even my parents can get away with calling me Danny. It's Daniel or nothing. Keeping my rage in check, I smiled and sat down, admitting, with more than a touch of embarrassment that I knew very little about the game and that due to a scheduling problem, I had not been invited to the demonstration of the code earlier in the day. I was doing the interview if not fully blind then with some serious cataracts.

Not feeling too confident, I asked Grant the question that had plagued me since David had asked me to do the interview - why another WW2 game. His answer began to set me at ease, "We have 22 members of the *Allied Assault* team plus all the production leads. WW2 is just something that's pretty dear to our hearts. We feel that we have a lot of experience with WW2. We're really good at it. Being a new company we have a lot to prove, so we might as well start with what we do best. And if it ain't broke, don't fix it." Fair enough, they do have a fairly impressive WW2 resume with *Allied Assault* under their belts. By the way he was talking and the passion in his words, I got the distinct impression that *Call of Duty* is the game that Grant and the team wanted *Allied Assault* to be.

Unlike *Allied Assault*, *Call of Duty* will feature four different campaigns - American, English and Russian, as well as an enigmatic fourth campaign that will "tie the whole thing together". Try as I might, I couldn't pry any extra information from Grant



Developer: **Infinity Ward** Publisher: **Activision** Distributor: **Activision** Due: **November**

about the fourth campaign, but he was far from backward about coming forwards with information about the three announced campaigns. "We spent a lot of time trying to differentiate the gameplay between the three different campaigns. With the Americans you're well equipped, you're well armed with full squads attacking strong German emplacements. With the British it's more about small squads being inserted behind enemy lines doing espionage and sabotage. They're the SAS - the world's first special forces. With the Russians you're just one body in a wave of humanity. A lot of the time you don't even get a gun; it's your job to run with these waves, if you show fear or try to turn back there are commissars who will kill you and it's your job to scavenge weapons off the battlefield to continue the fight for Stalin against the great enemy." There is a certain fatalistic romanticism to fighting in a Russian military campaign and the idea of being able to play through an entire campaign really peaked my interest.

Lesser known battles

Going with a Russian campaign is really quite a ballsy move as many gamers may not be familiar with the scale and ferocity of the fighting. We've all heard of Normandy and Pearl Harbour, but how many people know of the battle for Kursk, the biggest tank battle of the war? "We wanted to showcase the three main members of the Allied powers. You had Stalin, Churchill and Roosevelt making plans on how they were going to take out Nazi Germany. The Russians are just such a stark contrast

against how the English and the Americans had fought. It was an untold story and something we always wanted to do. When we were designing this game, we were like, "we've gotta show the Russians. We've gotta show the Russians". It became apparent that the Kursk was a battle Grant was personally familiar with as he displayed great enthusiasm when he went on to explain another major factor in the Russian campaign, "With the advent of the T34 tank you get to see the get Germans beat at their own game. They were the masters of tank warfare, and then all of a sudden what they considered to be a primitive opponent comes up with the best tank of the war. We even showcase that in Call of Duty. You are a member of a tank platoon fighting Tigers and Panthers in you T34." If nothing else, the prospect of being able to drive a T34 (Best. Tank. Ever.) further served to warm me to the game, as well as answering what was going to be my next question - will Call of Duty feature drivable vehicles. With nary a pause, the producer added, "You get to ride in cars and trucks, and man anti-aircraft guns. We really do a good job of pacing. After you've just been in a really intense battle all of a sudden you might be able to do a vehicle mission or an espionage mission."

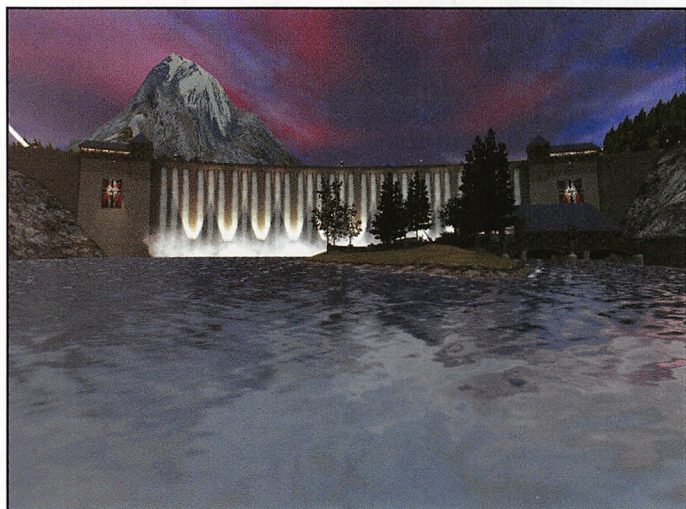
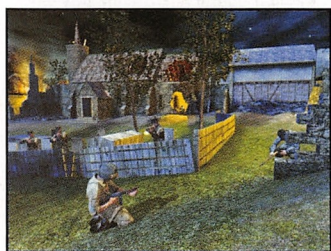
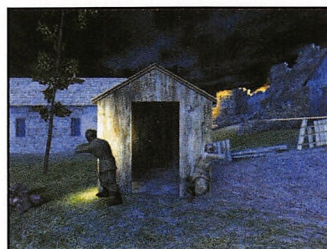
The next big question is that of non-linearity. Many people seem to complain when a game, especially a FPS, has a linear story line, but these are usually also the first to complain when a game is too formless. Grant was honest about the linearity of the game, but given the premise it can't really be avoided - "Our singleplayer game is objective-based and it's got a

real cinematic feel. It's not like Grand Theft Auto where you just get to run around and do anything you want." Instead of the level design leading the player to the next objective, the AI will do it for you according to Collier, "There are definite objectives you need to get done and you have a commanding officer that is giving those objectives to you and telling you to get going. In the Russian missions, if you're not following orders the commissar will just kill you. You have objectives and you must attain them. Sometimes you have a set amount of

time - say you've got to hold a building until reinforcements arrive and you've got three minutes, if you decide to high tail it out of that building, you've lost the mission and the game is over." Sounds like it sucks to be a Russian.

The little people

Another differentiation in approach from other WW2-based games comes with the characters you play in the different campaigns - they're all just normal guys, grunts far enough down the food chain that you're not going to be single handedly responsible for



saving the world. As Grant so succinctly put it, "Not only are you just one person in the army, you're not even the leader of the squad. There's a commander in the squad who's giving you orders. "You need to flank the position, we're going to pour fire on them, we want you bring out their sniper so we want you to be the rabbit". You're taking the orders, not giving the orders." Pre-empting the grumbling that the previous statement would cause amongst FPS fans, Collier went on to add, "We give you a certain amount of control because the AI is pretty powerful, so if they see some cover they're going to take it, if they see a machine gun that's idle they're going to run over and turn it on the enemy. Having your hands on a big, beefy machine gun is fun, so we want to give you the option of doing patting the guy on the shoulder. He'll back off, give you some covering fire and let you take the gun. Same thing with cover."

At a loss for anything else to ask, I posed the question of multiplayer. Grant was a little coy on the subject, stating, "We're not really releasing a lot of information on the multiplayer right now. Multiplayer will ship with the game - we've had it in and running for many, many months. We've had a lot of good games with IW vs Activision. A lot of the basic modes that you'd expect from a firstperson shooter will be there - deathmatch, team deathmatch, objective mode, plus a few game styles that you haven't seen before." I felt a little awkward leaving an interview on such a note, but luckily, the Goose and Activision had organised for Grant Collier and Michael Boone (another COD/Infinity Ward producer) to come over to the PowerPlay office and give us a private demo of the code that evening accompanied with pizza and beer. With that thought in mind and a growing desire to play the code, I



headed back to the PCPP bunker to set up a demo PC and prepare myself for what was to come.

Pizza and beer

Cut to later on in the evening: I'd just finished installing a 9700 in Bennett's PC, so we can play the code, and David's in the middle of a game of Pro Evolution Soccer (his other passion besides CM4). I'm a mixture of nerves and excitement - I really want to play the code now, but I'm afraid to be disappointed and Grant could get all defensive. When they arrive, Grant begins to busy himself with installing the code, Kristy from Activision orders us some pizza and I go on a beer run (Grant likes Cooper's Pale). By the time I got back, the pizza had been delivered and we talked, ate and drank beer. Finally, it was suggested that I should start playing. With trepidation I sat down at the PC, changed the mouse setting back to non-inverted (Goose is crazy about invert - it's a sickness without a cure) and settled in to play. The mission began. I was part of an American night attack on a Nazi held village. In the distance tracer fire pinpoints the location of German anti-aircraft guns. It was beautiful. Earlier in our interview, Grant had explained that Call of Duty utilises a vastly modified Wolfenstein engine, itself a vastly modified version of Quake 3. I was dubious at first when Grant explained, "We used the Wolfenstein tech to get up and running early, which was a great benefit. We had gameplay for the game three months in - I think on our last project it was 12-13 months before we could actually see the gameplay. We were able to really massage that gameplay early on. We've taken the battlefield experience not one level above other WW2 shooters but several. We've replaced almost every single component of the technology to give the players this experience. We've changed the scripting system, the animation system, the AI. We joke in the office that basically all we have left of Quake 3 is the menu system." He wasn't joking in the slightest. As the screens can attest, COD looks

incredible and, due to the nature of the engine, should be able to show good graphics even with lower specced machines.

Suddenly a voice screams out, "get down". I hit the prone button and make love to the dirt - just in time. Nazi bullets sound like angry bees as they tear their way through the air above our heads. We slowly make our way forward, laying down a nice blanket of suppressing fire, allowing us to get close enough to a nearby burnt-out house to take cover. We inch our way through the houses, driving out the Nazi menace. Finally, it's all over, bar rounding up stragglers. Our first mission has been a success. Next mission. It's the next day, now we must defend the town we captured the night before from Nazi attack. We survive. Then we have to take out not one but two Tiger tanks hell bent on making us ex-Americans. Finally, I get the chance to pilot a tank myself and show the Germans why they shouldn't belittle Russian engineering. Unfortunately, the dictaphone was too close to the PC to pick up enough of the smattering of conversation that went on over the next two hours, but by the time it's all over I'm so full of adrenalin my legs feel rubbery. We want to play longer but didn't want to risk setting off the time-activated alarm. I may have started the day as a sceptic but I ended it as a convert. We tried to convince Grant we were trustworthy enough to leave a copy of the beta code on our PC, but he insisted on uninstalling it. I needed to sit down and have a breather. Kristy, Grant and Michael said their goodbyes and left. Finally, I got up to go home, stopping just outside the door to try to light a cigarette in the gale-force winds, my hands still shaking from the adrenalin. David caught up with me to ask what I thought of the code. By that stage of the night I had run out of words and could only think to say, "holy shit!" David smiled and nodded, silently agreeing with me. For one brief moment we understood what was going on in each other's heads - we wanted to be back inside playing.

Daniel Wilks





Neverwinter Nights

Hordes of the Underdark

As the Neverwinter Nights mod community picks up the pace, so does Bioware with the second official add-on. **March Stepnik** opens the floodgates...

B ioware wants to thank you. And by you, we mean one of the 1.4 million people out there that took a punt on Bioware's follow-up to its entirely successful Baldur's Gate series, Neverwinter Nights. See, they're really quite stoked. Not only did you buy the game as if computer roleplaying was going out of style, but you really, really liked it, too. And more importantly, you let Bioware know. According to the Edmonton, the Canada-based developer, of all the people that bought Neverwinter more than 90 percent continue to play an active part in what it calls "the Neverwinter community" - be it creating new modules, discussing issues at the NWN forums or creating the numerous websites dedicated to sharing the NWN love.

This appreciation also extends to the reception given to the critical first expansion pack released for NWN - Shadows of Undrentide (85%, page 80 PCPP#91). It proved a bit of a gamble on Bioware's behalf; it was the first expansion being developed outside of its own walls (even if under its watchful and supportive eye), and the first to break from the established tradition of providing an adventure that allowed players to develop characters used in the main game.

Nope, Shadows thrust you into a new world and forced you to start from scratch, not only building a rapport with the virgin characters and story presented, but with the distinctly new style of play, as well. After preparing players during the prologue chapter module, FloodGate Entertainment (developers of SOU) removed the ability to magically teleport out of any situation back to a safe haven once you left the game's starting location on Hilltop. This encouraged new strategies that Bioware wasn't sure would be well received.

The gamble paid off and from all reports, feedback was almost unanimously positive in response to changes featured in SOU - you guys just loved it. And so Bioware has been knocking together Hordes of the Underdark - Neverwinter's second expansion pack with a



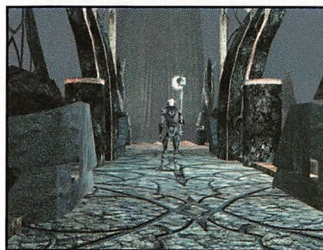
markedly different approach. Where Undrentide was a more experimental affair, this expansion is Bioware's thank you gift - and has been designed with the NWN fan very much in mind.

Here we go...

"The majority of the features we're putting into Underdark is the stuff that the community wants to see," remarks Bioware's Darcy Pajak, Hordes of the Underdark's Assistant Producer, during a recent demo attended by PCPP. And what's that exactly? Evidently, Dungeons and Dragons Forgotten Realms' players really like things dark, and powerful. And things don't get much darker than the subterranean race of dark elves - also known as the Drow - and their harsh and barren underworld (where part of this game is set), nor more powerful than the

allowances set out in the year-old paper-based expansion to D&D, the Epic Level Handbook. The recognition of the Epic Level Handbook has shifted the player experience cap of 20th level to that of 40th level. And that means a more colourful and devastating palette of feats and spells will be made available to the player, around 50 each taken from Epic Level. "One of the new spells is called Hell Ball. It takes every single elemental attack spell - fireball, lightning bolt, icy blast, and more - and rolls them into one. It has a massive burst effect - it's just an absolutely brutal spell," explains Pajak as he demonstrates its effects. The screen becomes awash with a multicoloured light show - a nice reflection of the damage being done.

Weapons-based characters haven't been neglected either.



Developer: **Bioware** Publisher: **Atari** Distributor: **Atari** Due: **December**

There'll be a host of arms in the game with increased functionality - we witnessed a sword with the ability to turn its target into stone.

It's also evident to Bioware that the community wanted things a little more challenging. Underdark is being designed for hardcore D&D players with a very firm grasp of the 3rd Edition rules, and so Bioware feels less obliged to tone down the challenge ratings to a more mainstream-friendly middle ground. So naturally, there'll be higher-level, more powerful monsters ready to put up a nasty fight in Underdark. Bioware has officially announced four of the sixteen new creatures to feature in this expansion, being the highly requested beholder, mind flayer (Illithid), spider demon and, the half spider/half Drow, drider. During the demo we also spied mithral and adamantite golems, and there was talk of a demon flesh golem - formidable opponents in their own right.

But the challenge in Underdark won't come solely from your enemies' ability to hit harder; their AI routines have been given a tweak and will now act with more cunning. This is best illustrated with magic users,



who'll absolutely cast the right spells at the right times. For example, a typical encounter will start with an opponent masking themselves with an invisibility spell, and then with the appropriate buff spells. Then come the summoned creatures.

But didn't this happen in Neverwinter? Yes, but in a clumsier, more forgiving fashion; Underdark's spellcasters will be tight, so be prepared with plenty of counter-spells and for many a drawn-out encounter. Indeed, this is not a game for low-level characters. Bioware suggests you won't stand a chance with anything less than a 15th level character at the beginning of the game. While there will be some pre-made characters to be shipped with the game, Bioware has devised an automatic once-off level-up process, bringing any of your other favourite characters up to speed. Pajak also recommends players make use of the six new prestige classes available, if only for the sake of the cool new abilities they possess. The Plane Shifter, Weapon Master, Dwarven Defender, Red Dragon Disciple and the Champion of Torm prove an interesting bunch, with the majority lending to more powerful attacks and defensive capabilities. The Planar

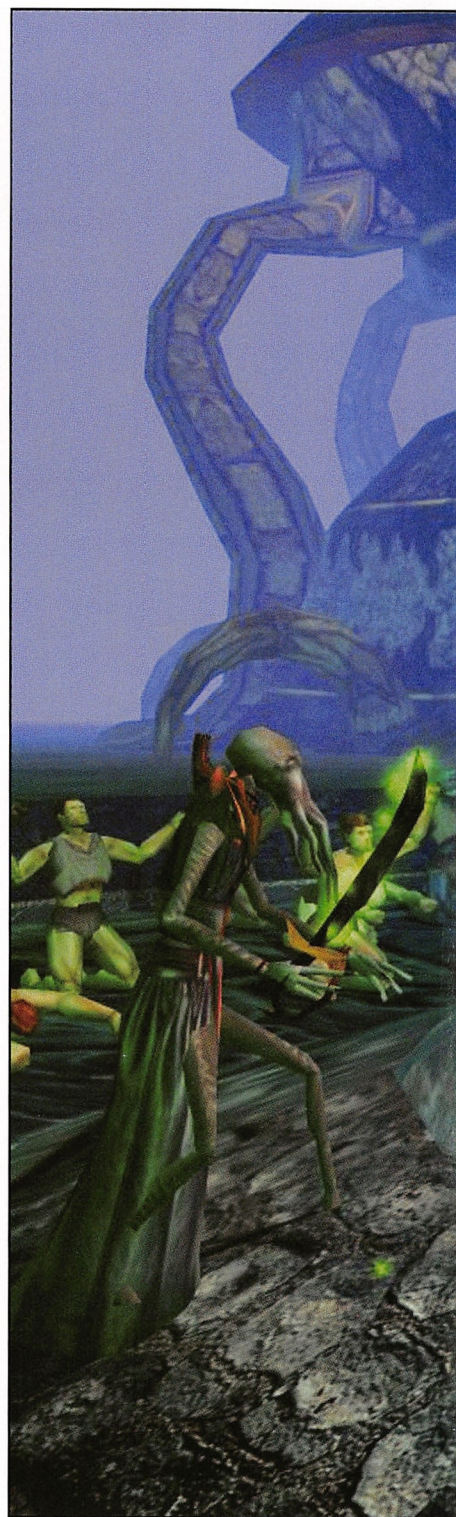


Shifter offers the ability to shapeshift into all manner of other-worldly creatures, whereas the Red Dragon Disciple proves most intriguing: sprouting wings, this class can breath fire and features immunities similar to the dragon class.

Deep water

To the delight of fans, Bioware has put plenty of work into ensuring most aspects of Drow culture are represented to the observant player. Underdark tells the story of crisis within Drow society. The spider goddess Lloth - a source from which the rulers of the Drow gain their power - has disappeared, resulting in a struggle for top job in the Underdark. A particularly ambitious dark elf - Valsharess - rises to power, largely in part to her ability to unite groups of elves, beholders, mind flayers and duergar into a harmonious band to do her bidding. During a magic ritual, Valsharess divines the hero who is the only one possible in stopping her nefarious plans. And that hero - your character, incidentally - happens to be chillin' in another beloved Forgotten Realms location, the fabled port town of Waterdeep, in the Yawning Portal tavern.

The game begins with you awakening from a dream aware that a Drow rogue is stealing all of your equipment, leaving you weaponless as a result - although your character may be rich in experience, Bioware made the decision early to start from scratch in regards to equipment in Underdark. Descending the stairs, your character is met by several of the hirelings featured in the original



Neverwinter, including Daelan Red-Tiger, Linu Lanaeral, and even Deekin - the hapless kobold punk-turned-bard from Shadows of Undrentide. More than anything, the encore performance of some of the Neverwinter henchman should address the balance issues of Undrentide - this time offering more powerful companions to the less physical character classes like rogues or sorcerers. To even better even the odds: players in Underdark can now have two henchmen working by their sides.



With the henchman alert, the stage is now set: these capable warriors fight off the Drow attack and serve as willing companions on your quest to crack the mystery behind the Drow incursion into Waterdeep.

Pajak is quite proud of the decision to begin the adventure in the town of Waterdeep: "Not only is Waterdeep a very well-known and popular town in the Forgotten Realms, but it's home to the Undermountain dungeon, a magical dungeon built by an insane magician called Hallister. It was designed by Wizards of the Coast

as a perpetual adventure dungeon - so its contents randomly change all the time." He wouldn't elaborate further on the structure of Undermountain, hinting that it will feature random elements and will please the fans. However you can expect plenty more puzzle-based areas in the dungeons of Underdark - the community absolutely loved the more cerebral approach to adventuring found in the first expansion pack over the more pedestrian design of Neverwinter.

However, it's the module making and playing community

that keeps Neverwinter Nights on high rotation, and Bioware wants to show their gratitude here, too. Of course, all new features injected into the commercial Underdark expansion will find an extended life with the prolific Neverwinter module community, and there are some new features specific to the Aurora toolset - Neverwinter's module editor - as well. It will now feature wizards on merchants and stores, and on henchman, to guide editors step-by-step in making complete -

working - NPCs.

And the mod community also keeps Bioware on its toes. The outstanding quality of mods out there (which are also free to download) is being noticed. "We're inspired by what's being done - there's some great stuff out there," enthuses Pajak. "We've actually hired two guys from the mod-making community to work on Hordes of the Underdark."

As far as gratitude goes, that's as high as it gets in fan-based communities. Cheers Bioware.



War of the Ring

After redefining the RTS with Battle Realms, Liquid Entertainment needed a new challenge. **Timothy C. Best** finds out what happens when Middle Earth goes to war...



The canopy of the forest stretches so far into the sky that you can see the leaves move slowly by the camera. You're actually in Mirkwood. Down in the maze-like woods Gollum skips between dynamically pooling shadows, almost disappearing in the darkness. Forest creatures startle in surprise, some run, others bare their teeth, but none catch Gollum.

A low wind pulls through the great forest, playing with the hunting Elves' cloaks, causing them to whip back and forth like the tail of an angry cat.

They should have taken Gollum long ago but the Necromancer's presence ensures more than just their prey lurks in

Mirkwood. On cue, giant spiders crawl out of the forest depths, and without healers a single bite could prove fatal.

Welcome into the world of War of the Ring. When you explore this game it's hard not to be impressed by obsessive attention

to detail. In The Great Forest the canopy is higher than the game camera so you do see leaves and you are inside it. The shadows are all dynamic and not only is there animated clothing in the game, there is a wind system that shifts and tugs cloaks and flags back and forth. The animals come with a fight or flight A.I. and not only does the water shimmer but, for the moment at least, if you brush it with the cursor it ripples.

All of those touches would be nice in an RPG, in an RTS they're magic. Ed Del Castillo is the president and a lead designer at Liquid Entertainment and he says that they are trying to do more than just create Tolkien's battlefield; they want to give players a living reference to Middle Earth.

The Two Towers

Talking to Castillo you get a sense for these two great competing forces in War of the Ring. One is the

majesty and gravity of Lord of the Rings and the other is pure fun. He moves from spouting hard Tolkien lore including obscure names, dates and places to animated descriptions of how Legolas can send enemies flying with a single shot and his favourite mini-campaign which follows the exploits of dwarves struggling to build a colossal catapult and then blasting Orcs up and down the screen.

Lord of the Rings was high fantasy that played fast and loose with medieval conventions, managing, in the process, to create something massive and soaring. It looks like the acclaimed creators of Battle Realms are going for much the same thing here, where RTS and the One Ring collide.

Middle Earth At War

One of the elements that make the story of LotR so impressive is that the events in it are the culmination of thousands of years' worth of battles and Liquid intends to drop players into as many of those as possible.

Castillo says that this called for a "History Channel" approach, with missions and campaign branches presented like the World At War series, with grand introductions and scene-setting voiceovers.

New episodes of "Middle Earth at War" are unlocked as you complete missions and players will have to choose whether to follow their current mini-campaign to the end or whether delve into one of the branches and maybe see where that leads. You can always go back to previously unlocked paths, but because upgrades go into a cultural pool and carry between missions the order you tackle events does make a difference.



Developer: **Liquid Entertainment** Publisher: **Black Label Games** Distributor: **Vivendi Due** November 2003

Liquid have tried to steep single player in the Tolkien experience – including side quests, and multiple, sometimes shifting objectives – while focusing multiplayer on more intense (read: hardcore) RTS action.

It should be noted that the game does not follow the exploits of the Fellowship and this was deliberate made for two reasons: Castillo didn't want to trap in battles that are foregone conclusions nor did he want to mess with the sanctity of some of fantasy's greatest moments.

With a high-on fanatical following like Tolkien has, would you want to mess with Gandalf's stand against the Balrog?

This doesn't mean that players won't get to take part in some authentically cool Tolkienian action: "the heroes that we do have are authentic to the locations that they were at, are authentic to the events that occurred in the histories of Tolkien and they are the epicentres of the stories that are being told there," Castillo explains.

Heroic Endeavours

Pretty much every character who so much as utters a war cry will appear in this game from Théoden to Eomer and Gandalf to Saruman. Each comes with skills that might not have exactly been in the books, but which guarantee heroics.

Gimli, for example can bust into an enemy tower, throw out the garrison and shoot down on them until they flee or destroy their own building. That kind of thing kind of puts a damper the old tower rush.

Legolas can get a "True Shot" that has exceptional range, does good damage and has enough knock back to be deadly around cliffs, walls and water. Being an all-round commando type, he can climb walls as well.

When it comes to strategy Castillo says they've not only got Rock, Paper and Scissors covered, but also "Screwdriver, Bomb, Spiked Club and Laughing Clown".



Part of this strategy obviously comes from the armies themselves and you'll find that since LotR concentrates on the personal events of the pivotal characters, the actual army specifics fade into the background. No one wants to see 500 generic Orcs in ugly chainmail versus 500 generic Elves in pretty chainmail, so Liquid needed to take some liberties while saying true to the feel and philosophy behind the series.

What they came up with lead to two sides that differ greatly.

"On the good side we really focused on a feeling that team-work wins the day," says Castillo.

This is reflected in the special abilities and units available. Legolas, for example, gets to summon a "Guardian Wind" which causes all the arrows in an area to miss and there is a unit called Dwarven Shieldbreakers who do diddly damage but shred opponents' armour. Alone, either of these abilities isn't going to have much impact, but supporting other units they can turn a battle. The side of Light is all about coming together to make the sum greater than the parts.

I HAVE THE POWER!

In the ancient world of Middle Earth, there are places of surreal majesty that make the skin tingle. These are Places of Power. They extend the battle for terrain far beyond securing gold or mana (or in this game, food and ore).

Places of Power leave the army holding them bristling with might, doubling speed or hit points, for example, and Liquid has discovered that people tend to war around Places of Power more than they fight around their bases.

If someone holds more places of power than you, chances are that direct base assaults are going to fail. That doesn't mean you shouldn't try them as part of a larger strategy, because it gives your foe a dilemma: protect production or protect raw power.

"It creates a whole layer of dynamics that we haven't seen before," says Castillo. "In multiplayer, especially, you have a whole new set of objectives beyond, 'kill his troops, kill his base.'"



The dark side is just the opposite. Its strength is that it's chaotic and decentralised. Evil can set up autonomous bases very quickly, and works well in small packs which tends to evolve a hit and run mentality.

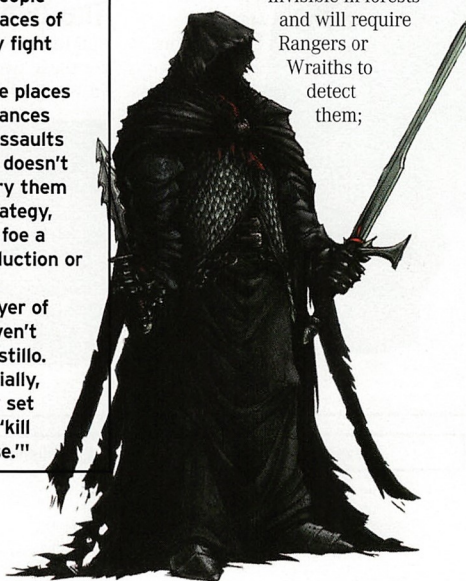
Maybe a small group of long range troops will attack from one side, while fast hand-to-hand troops rip into enemy workers on the flank and so Grishnakh can plant a bomb in the confusion. You still have to co-ordinate the dark side, they just don't need to stand together and hug.

Players will see Balrogs and Ents, the Ring Wraiths, Rangers, Gondor Swordsmen, Troll Bonecleavers, Uruk-Hai, giant spiders and so much more.

Special Forces

Every unit will have a role and most will have special abilities. For example, some elves will be almost

invisible in forests and will require Rangers or Wraiths to detect them;



Troll Bonecleavers will deliver knock-back attacks to all enemies in melee making them virtually impervious to hand-to-hand, but they are countered by knock-back immune Riders of Rohan; poison users can be defanged by immune troops or healers; and the list goes on. We're not quite sure where Laughing Clown comes in (unless Tom Bombadil appears) but it's obvious what Castillo means by saying War of the Ring strategy goes far past Rock, Paper, Scissors.

To keep all of these special units special, and not just cannon fodder, Liquid expects clashes to max out at about 30 on 30 for most battles.

That said, Castillo says, "we give them the Helm's Deep of the world," but for those battles the special units tend to stay at home and the units you can produce en masse come out to play. Those battles are brutal, direct affairs where forces meet like crashing waves, and broad strokes win the day.

High Gloss

What makes Lord of the Rings high fantasy is the way it glosses over all of the little nitty gritty and focuses on high ideals and heroics. I've had to do a lot of glossing here too. I haven't even mentioned some of the vital mechanics like the fate-point



experience system, which buys hero upgrades and activates the game's subtle magic system or the control options which go right up to allowing you to queue not only commands, but patrol paths. Even the dastardly AI is noteworthy in the way that it not only scouts effectively, but feints and uses 'wounded bird' tactics.

Then there are the host of commonsense touches that seem like they should be in every RTS. Every unit upgrade is represented visually, so if someone gets level two armour you're jolly-well going to see more impressive armour. If you set fire to something it takes damage and can burn down. If you knock enemies off wall or cliffs, they take damage and if they land in water, they can drown.

Each element of War of the Ring

seems as carefully executed as the flags that respond to the wind or the AI that controls forest creatures to make the woods come alive.

With Battle Realms under its belt it's pretty certain that Liquid knows how to make an RTS and with the impressive list of new features as well as an obsessive level of detail, War of the Ring is sounding every bit as grand as it should.





Hidden and Dangerous 2

What? Not another military shooter! But wait, this time it's squad-based and tactical. **Daniel Wilks** sneaks behind enemy lines to investigate

When the original Hidden and Dangerous was released a few years ago it was really a hit and miss affair. Many players seemed enamoured by the mix of tactical group based combat and quasi-RTS gameplay but an equal number were put off entirely by the staggering amount of bugs the game shipped with. Luckily it seems as though Illusion Softworks has taken the criticism to heart and pulled out their thumbs (and all stops) with the second game in the series, imaginatively titled Hidden and Dangerous 2. As many of us here in the PCPP bunker were, if not fans, then quite impressed with the first game in the series, we were quite excited by the announcement of the sequel. Will it live up to our expectations? Only time will tell but at this stage of development the project looks a good deal more polished than its predecessor. After a bit of negotiation it was agreed that we should do an email interview with Luke Vernon, Development Director of Illusion Softworks. After some deliberation the questions were set and sent leaving nothing left to do but wait. And wait. And wait. And wait some more. Thankfully in the meantime more information on the game was released, giving us something to do other than twiddle our thumbs. After two weeks of waiting we were beginning to believe that the missive had fallen into enemy hands and that the war effort may be lost but finally, at the 11th hour (actually, make that 12th) they arrived.

What to expect

The sequel will feature 23 single player missions spread across the entire warfront in which players will take control of a small unit of crack SAS troops with multiple level-based objectives with a final result that combines elements of games such as Rainbow Six, Conflict: Desert Storm and strategy games such as Myth or Commandos. According to the Development Director, Hidden and Dangerous 2 will feature, "7 campaigns, each set

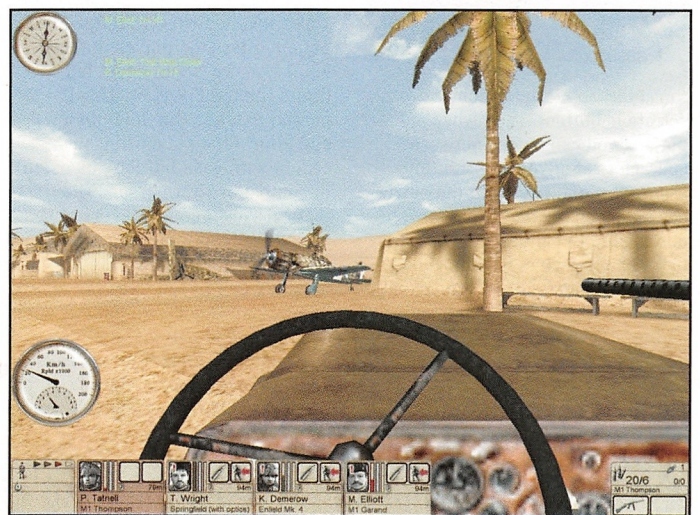
in a distinguished setting...The Arctic, North Africa, Europe... Norway... just wait", making the crack SAS troops the most well travelled soldiers in WWII. Vernon cleared up a couple of our queries about how a squad to travelled so much of the world by stating for the record, "The game is based on a number of historical facts and on events from the war but it is no way a historical re-enactment. We have used artistic license to bring various facts together to create great game settings". Artistic license has definitely been taken with the two optional game modes that will ship with the game. The first, tentatively titled Lone Wolf will allow players to make their way through the single player campaign without the aid of squad mates and the second, Carnage turns the game into a simple kill or be killed deathmatch, pitting the player against every enemy character on the map with the sole goal of killing everyone.

One of the most impressive things about Hidden and Dangerous 2 thus far is the unit AI. Most tactical squad based games feature companions that are, to put it politely, only slightly more intelligent than your average houseplant, forever running in circles, ignoring the enemy, standing in the

middle of lines of fire - you know the drill. It appears that the team AI in H&D2 is just the opposite, capable of taking care of itself as well as taking orders. This is very lucky, as many of the missions will require simultaneous action from the entire squad, such as infiltrating an installation (move and fire, move and fire) or taking position (covering fire). Orders are issued through a simplified version of the orders menu found in the original Hidden and Dangerous, accessed at any time by right clicking the mouse.

Who's out there?

As far as character selection is concerned, here's what Vernon had to say, "The player is given a pool of SAS soldiers to choose from. The different characters have varying abilities, strengths and experiences to take into consideration if hand picking a squad (the player also has



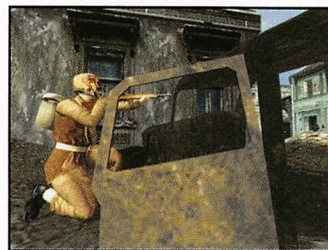
Developer: **Illusion Softworks** Publisher: **Take 2 Interactive** Distributor: **Take 2** Due: **November**



would be predefined, levelling up each character in their own specific way. Luke definitely didn't beat around the bush with his answer, saying only, "predefined". Initially we were kind of disappointed by both the decision and the answer but after a bit of thought they both make sense. Opting for predefined character development makes players far less expendable, as only a few will have the skills required for specific missions. In this way player will be forced into protecting all characters, not just their favourites or the ones who they think are more useful.

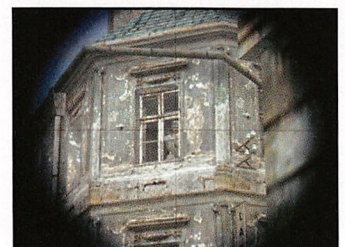
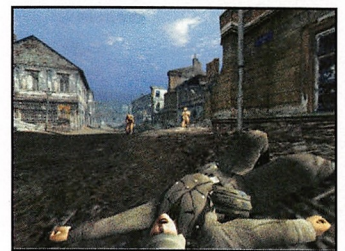
Your mission

We think the next question may have lost a little something in translation - after asking whether the game would feature a set mission structure with all objectives set out at the beginning of the mission or whether missions would play out in a dynamic manner with achieved objectives and player actions unlocking new objectives and events, we received the following reply, "Um, in a dynamic way. This means that each player will have a slightly different



choose from and whether they would be replaced if one were to die, he also gave us a much-needed lesson about mathematics in the real world, saying "the pool consists of 30 guys. When one dies there are 29 left". Aside from needing the guys to remain alive to complete the game, taking good care of your characters has an additional benefit, gaining experience. Vernon explains, "As you use the guys and keep them alive, they gain experience, strength, and other abilities (such as first aid, lock picking) that enable them to work faster, more effectively and more professionally as the game goes on". He also went on to add in one of the greatest self-explanatory statements of recent time, "Dead soldiers don't gain experience".

If you can accuse Mr Vernon of being anything it certainly can't be of being vague. From our brief email conversation we got the distinct impression that he was a pretty straight down the line type guy. Case in point: one of the little niggling questions we had about the game was whether the character advancement for the various squad members was dynamic, allowing players to level up characters in a quasi-RPG like way so players could tailor gameplay to their own specific styles or whether the progression



the ability to hit the 'automatic' selection' button). Then when playing you can switch between characters at any time, each time assuming command with the newly controlled character. Great fun". It does sound like great fun - swapping between characters to get a good look at the map and use human skill to aid the AI. Vernon went on adding, "Then there is the strategy mode interface, which allows for a whole other approach while viewing the game from a new angle (think

RTS) and being able to issue real-time or even 'paused' commands before sitting back and watching the action". Although it is possible to play through the entire game in first, third or tactical perspective, a mix of the various styles seems to be the key to victory, as each of the views has its own strengths. First person offers the player the best ability to aim in the game but limits the field of view. Third person extends the field of view and allows the player to issue orders with ease but isn't as useful in combat as first person. The tactical view allows players to see the entire map including hidden enemies and allows for the most complex tactics but does not allow any human input with actions such as aiming and using skills.

Next up, Vernon not only gave us some valuable information about the number of characters available to

Aside from adding some much needed gloss, the LS3D (Mafia) engine brings with it a host of benefits including great scalability and seamless integration of vehicle physics

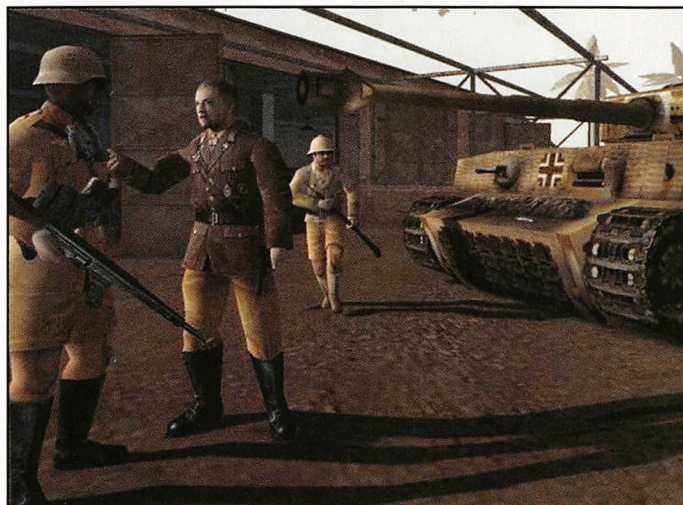
experience to the next. It means that the game will have refreshing replayability and unique special moments that you will retell in a conversation that will be overheard by a few people who only catch the over-excited physical re-enactment of flanking and clearing an enemy depot before storming a bunker after taking a crippling leg shot from a sniper hidden deep in a sweating Burmese jungle. And you will never feel so proud!" We're not entirely sure what this means but reading between the lines it appears that Hidden and Dangerous 2 will feature multiple paths and non-linear mission objectives. It also seems to indicate that the game will rely more on AI than scripted events, leading to more replayability and variation in enemy response. Don't quote us on this...yet.

One of the biggest changes with Hidden and Dangerous 2 is Illusion's move to using the LS3D (Mafia) engine to drive the game. Aside from adding some much needed gloss to the title, the LS3D engine brings with it a host of other benefits including great scalability and seamless integration of vehicle physics. Due to the combination of tactical and action gameplay, Hidden and Dangerous 2, much like the original game, allows players to switch between first, third and tactical (overhead map) perspectives. Unlike the previous game, the use of the LS3D engine allows players to do it on the fly, seamlessly switching from one perspective to the other at any time with no problem whatsoever. We asked Vernon about the change to the new engine: "The LS3D engine was always built with multiple games in mind. It's a very powerful and versatile base to work on and we'll see much more of it. We've also taken the vehicle physics and driving models from Mafia while adding newly desired enhancements to the feature set at the same time (e.g. Inverse Kinematics)". Well, that kind of answered the next question for us - whether there would be vehicle-based missions in Hidden and Dangerous 2. It seems as though every action game being released this year is integrating drivable vehicles - Vernon agreed, "For sure. The player will be able to command jeeps, personnel carriers, mini subs, tanks and more. You can drive or shoot, even drive and shoot or have your squad man any onboard weaponry and cause serious damage and danger".

For fans of multiplayer, Hidden and Dangerous 2 offers a mixed bag of goodies ranging from the usual deathmatch all the way up to four-player cooperative, allowing you to play through the main campaign with up to three of your friends. Although details have not been officially released, it looks as though

H&D2 will also feature a class based, conquest style multiplayer in the vein of Battlefield 1942 with servers supporting up to 32 players simultaneously. Players will be able to choose from the 30 available characters to play and there will be a reported 30 uniforms to choose from. Both class and character strength will determine weapon selection and all of the 25 or so vehicles should be available for use.

The major difficulties that Hidden and Dangerous 2 looks like it will face is overcoming the prejudice left over from the bugs in the first game and finding a way to stand out from the rest of the already very glutted WWII based shooter market. If Illusion keeps up the good work and the final product is as polished as it seems there should be no problem overcoming the prejudice - gamers may be a fickle bunch but they're also quite forgiving in the face of quality. As far as standing out from the crowd, the combination of fast-paced action gameplay and strategic, almost RTS mechanics should serve the purpose admirably. If all goes to plan the game should be released before the end of the year so we don't have much time left until we can find out - we're definitely looking forward to it.





Need for Speed Underground

Can't afford the latest Lamborghini? Join Timothy C. Best in putting together a more affordable (but just as mean) machine and take it underground

From the mysticism of Vanishing Point to the antics of Grease and Cannonball Run; from the darkness of Wraith to the rage of Metal Skin; from the pure recklessness of flying through Paris at 200kmph with a camera strapped to the dash to the sexiness of Fast and Furious, there has always been something about the danger, self-destructiveness and skill of street racing that has appealed to the leather-wearing rebel in each of us.

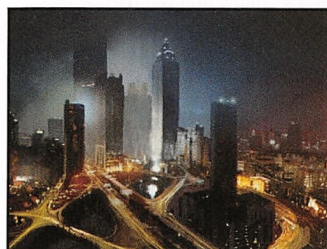
Need for Speed first hit the streets back in 1996. It was definitely more Cannonball Run than Vanishing Point. It was fast, bright and colourful. The next two games followed the theme of super-expensive cars colliding with grim abandon.

High Stakes added a career mode that upped the ante and paved the way for something a little more dark and gritty. We're moving from Burt Reynolds and Jackie Chan towards Vin Diesel.

Just like a certain furious and fast movie, this time the action isn't out in the open for all to see - this game is about taking the speed Underground. Gone are the European sports cars costing more than a medical wing; they have been replaced by cars you've probably experienced that shove you back into their bucket seats.

You might never be able to afford a Ferrari or Porsche, but almost anyone with the passion can drop some dough on a decent set of wheels and turn it, part by part, into something that moves like a sports car costing five times as much. That's the heart of Underground, building your own style, stamping out your own rep and making everyone else like it. For players with high-octane pumping through their veins this game offers a tuner's paradise of precisely machined aftermarket parts while even the mechanically-challenged can appreciate the heavy sheen, the sense of speed and putting together a ride so sexy that it stops traffic. Welcome to the Underground.

The Need for Speed series has



always been about rocketing velocity, and in that respect this game is no different, but in style and feel we have a whole new ball game.

"When we took a look at what was popular on the car scene, it became very apparent that where we needed to go was in the direction of 'tuner' cars", explains Hugues Ricour, the PC Producer of the game.

While there is a free race mode, the heart of the singleplayer experience is all about going from zero to underground hero.

"With the career mode, we add the tuner culture to classic racing games, to underscore what is fundamental to this generation: individuality and self expression," says Ricour.

Driving Forces

Players hit the scene with some dollars, a low-end car and an attitude. They have to battle their way through the ranks earning respect as well as the dollars to keep their ride on the road and fully stocked.

The difficulty level is progressive and the AI is adaptive to the player's skills, so don't expect the Underground scene just to fall at your feet. These are some serious hobbles.

"Your opponents will use the entire track to weave through oncoming traffic, pass you and then



run you off the road," Ricour says.

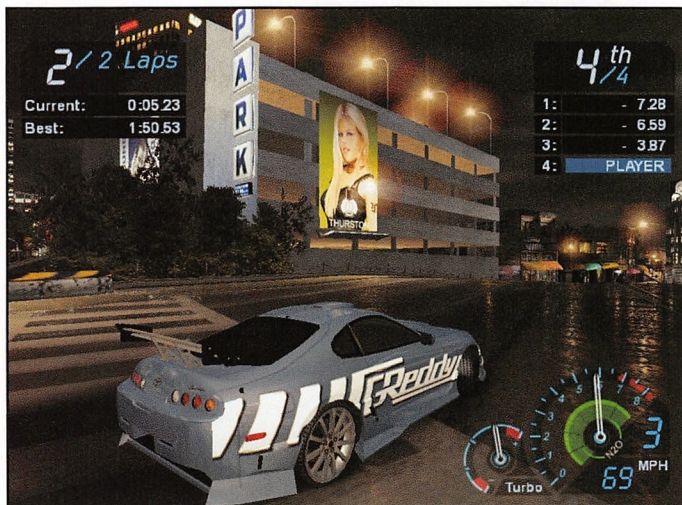
"They won't just be after you, though. They're just as committed to beating each other as they are to taking you down. You'll have to keep your wits about you and save some nitrous oxide for the home stretch."

To spice things up, the civilians you share the road with won't all dodge out of your way. Some will even get up in your face and hoot their horns and flash their lights.

Then there's the cross traffic at intersections. Don't hesitate, because if you miss the break in amongst the Sunday drivers you know the other guy won't. Just like a good punch line, it's all in the timing.

The tracks are all custom made to exploit various cars' strengths and weaknesses, and are set in the dark night of a fictitious US city where the roads are speedster's dream and the cops are all on holiday.

Developer: EA Publisher: EA Black Box Distributor: THQ Due: Early 2004



Players will be able to drive in trademark NFS point-to-point sprints, classic racing loops, 20 to 40 second drag races, as well as some special, multiplayer only, race types that EA Black Box is keeping under wraps.

Ricour says that of all the options, the drags are proving to be the surprise hit around the office. They are all about pinpoint

acceleration, precise shifts, tracking traffic and firing your nitro when it counts. Steering assist kicks in automatically to keep the focus on brutal timing and reflexes.

If this all sounds a little daunting then you might want to catch some practice in the Quick Race mode. Here you have access to all of the tracks, race-types, cars and upgrades that you have unlocked in the career mode. In the Quick Race sandbox you can own and experiment on as many hotrods as you like.

This will be a nice change, since players only own one car at a time in Underground mode and they will have to think carefully about selling their souped up machine for something new. This might seem like a strange limitation, but with all the fine tuning available, running one car should keep players busy enough.

"Car customisation is one of the major foundations of Underground and we're really blowing it out," says Ricour with a gleam in his eyes.

"First thing we did was go out and sign up every single aftermarket parts company that is significant to the culture.

"We currently have over 50 after

market manufacturers signed up and we're discussing about adding some of the car manufacturers' 'performance' parts divisions into the game as well."

These brands include AEM, Apexi, Bilstein, Brembo, DC Sports, Eibach Springs, Enkei, Greddy, HKS, Injen, Jackson Racing, Konig, Momo, Neuspeed, Nitrous Express, NOS, OZ Wheels, Skunk 2, Sparco, Stillen, Street Glow, Toyo Tires and Turbonetics - to name a few.

The game will also feature 20 licensed and fully customisable street cars from the likes of Mitsubishi, Subaru and Toyota - each one scanned in 3D from the actual make and model, for that touch of realism.

Players will be able to enhance nine separate areas of automotive performance including weight reduction, suspension and engine. Each of these areas is further divided

into three subsections, because we are talking 'fine' tuning here.

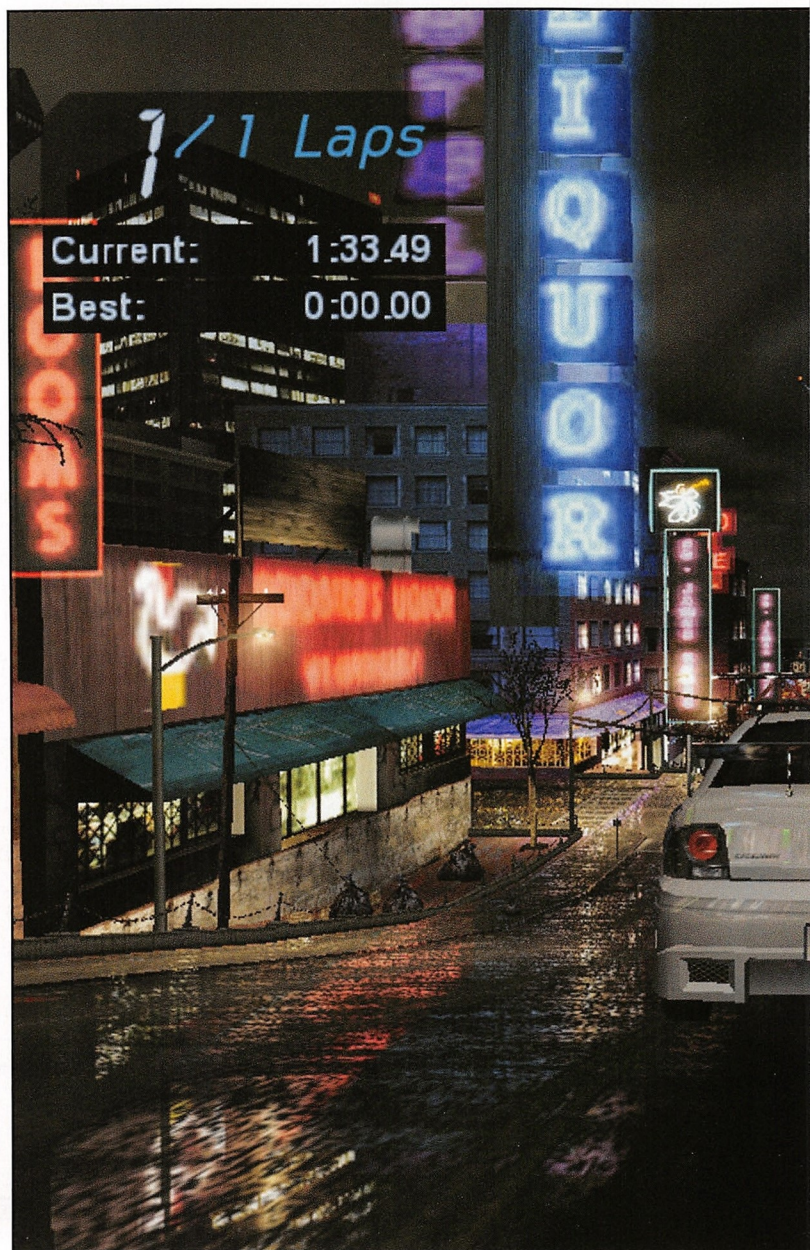
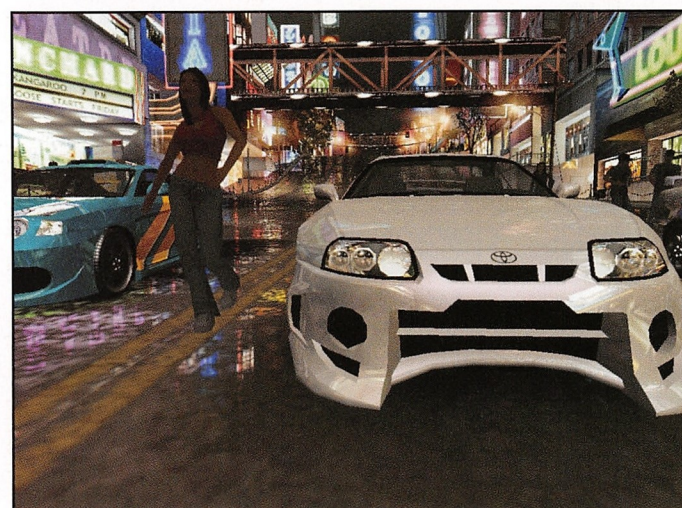
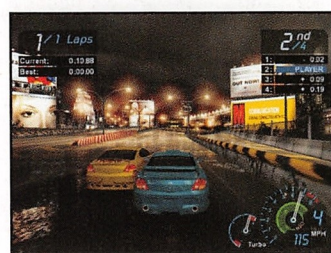
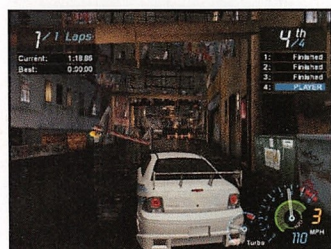
Upgrades come bundled in various collections of licenced aftermarket parts and which are all applied at once as kits, so no, you don't change your car one spark-plug at a time.

A nice touch is that these upgrades are reflected in more than just how your car handles. Say you swap out your suspension; you'll see you're car's clearance lower as the body of the car is 'slammed'.

Presentation Counts

Touches like this aren't just window dressing. On the street you race for more than just cash; your credibility is on the line as well. Underground keeps track of your mojo in two ways.

Driving exploits earn style points. Hold the line and you might win, but power slide into every corner and hammer on the nitrous at the last



second and you'll win with style.

The second element is reputation, which is linked to how stomping your wheels are. The more intimidating your ride, the higher your reputation goes and that translates into a style point

multiplier. Note well, it's your style points that unlock rewards.

"If you want to drive a 'sleeper' go ahead, your reputation will be lower and you won't score style points as fast," Ricour adds with a shrug.

Furthermore, if your car looks

too shabby, some drivers won't even race you. Apparently, some people couldn't live with being crushed by a beater car.

Fear not, there will be plenty of ways to change a beater to a beast. There will be more than ten different areas that can be visually customised using paint and vinyl, as well as installing neon for that special glow.

Ricour says that the team has calculated the combinations for any one car to be in the region of 71 billion and challenges that, "only your imagination will limit your ability to create the slickest ride possible."

Happy Underground

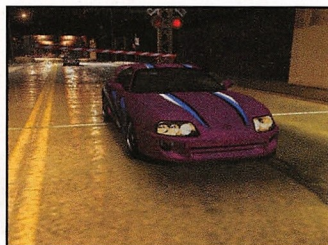
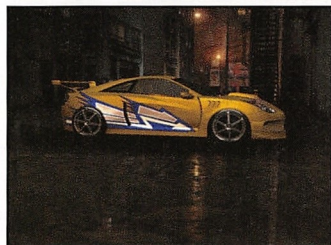
It's obvious that EA Black Box is really going to town on making a game that combines all the details that motor heads crave while adding an overview that puts less-technical drivers into the picture. Even if you don't know a spanner from a spoiler, you can always make the best looking car on the track and rake in the style points that way.

This team made NFS Hot Pursuit, so we know that they can handle the pace.

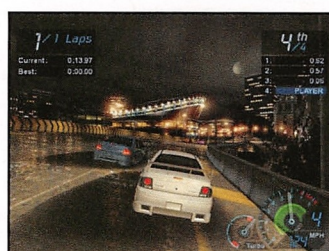
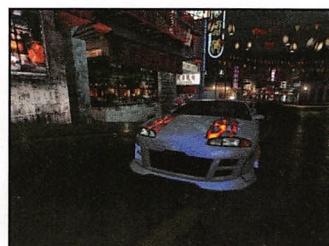
All in all, Underground is looking impressive, from the tuner options that are a rev-head's wet

dream to impressive sheen and the focus on driving sensation.

Of course, we'll have to wait and see how the career mode hangs together, what type of story Underground tries to bring to the table, and how the driving touch works in amongst it all, but so far, everything seems to be in cherry condition. Make sure you're ready the nitrous for early 2004.



"Car customisation is one of the major foundations of Underground and we're really blowing it out," says Ricour with a gleam in his eyes



A NIGHT IN AT THE THEATRE

The gaming den is no longer the sole domain of the PC. Stephen Dawson explains how you can make your PC the centre of your home theatre.



DVD PLAYERS

What does your computer need to play DVDs? Obviously, a DVD ROM drive. But you also need something to control it, and send the video and audio signals to the right places.

There are two approaches to playing DVDs on a computer: hardware and software. Which you should go for depends largely upon how powerful your computer is, and the state of your finances.

A hardware DVD player consists of a PCI card which takes the DVD-ROM drive's digital output, separates it into video and audio streams, and decodes both. These are delivered to an array of outputs on the spine of the card, ready to drive both a display device and the sound system. They offer three significant advantages over software players: they guarantee that you have a digital audio output (which comes as part of the card); they allow quite a range of TVs and projectors to be conveniently connected for viewing the DVD; and they take most

of the load off the computer's CPU for playback.

But, being hardware based, they tend to be less flexible. You are stuck with the player/controller software that is bundled with the card, and they cost a whole lot more than a software-only player.

On the other hand, if your computer is, say, a Pentium 3 running at 600MHz or less, it may simply lack the grunt necessary for good, smooth software DVD player performance. Or you may want to do other things while the player is running. Smoother playback is possible on a

machine with a hardware decoder because the CPU is generally not interrupting it.

Software DVD players, by contrast, are relatively cheap and flexible. Many, such as CyberLink's PowerDVD, can be upgraded with useful features such as Dolby Headphone decoding. With a fairly fast computer (2GHz CPU or better) this not only decodes 5.1 surround sound, but heavily processes it to provide a fairly realistic surround sound through headphones. Most offer other nice features, such as the ability to capture screen shots and run movies on the standard display within a window (hardware decoders such as the RealMagic Xcard take over the whole display, so no windows are allowed).

The significant problem with software DVD players, aside from the performance hit on your computer, is outputting video. An increasing number



of videocards have composite video, or even S-Video, outputs that can be plugged into a TV or projector, but these typically show only part of the screen on the TV when the resolution is set to higher than standard VGA. However, if you are using a projector to display the picture, then you can plug your computer's proper 15-pin VGA video output into the projector's input. This will actually deliver a higher quality picture than even the best currently available consumer DVD player (see under Projectors).

None of these issues arise with hardware DVD decoders because they have their own separate video outputs in a range of both consumer and computer video standards. They also have their own dedicated digital audio output (which many computers lack) for feeding sound to external equipment.

But they generally will not decode surround sound internally, as they deliver just two channels in analogue. For that they require the services of your soundcard. If your soundcard doesn't provide it, and you don't have a digital-ready external decoder, you are stuck with plain ol' stereo. And they cost hundreds of dollars, while you probably got a software DVD player for free with the DVD-ROM drive.

Whichever you choose, consider adding a utility such as Remote Selector (www.remoteselector.com), which has a couple of tricky features. First, it can overcome the region code limitations in your DVD-ROM drive (modern drives'



firmware permit no more than five changes of region code), so you can play foreign DVDs. Second, it can disable those pesky User Operation Prohibitions that restrict playback of a DVD, so you can skip copyright notices and interminable menu lead-ins, and get directly to the movie.



Okay, you have your PC all set up to play DVDs. Now, how are you going to see the picture? You have two options: internal and external. Internal means you use your computer's monitor. External means plugging the computer into something... some form of TV or, better, a projector. A projector provides

half of what home theatre is all about, a huge picture.

Actually, using a PC as your DVD player with a top-end projector has the potential to deliver a better quality picture than any DVD player on the market! The video connections from a DVD player to reduce the horizontal resolution from the 720 pixels across recorded on the DVD to not much more than 500 pixels. Plug the projector into your computer's monitor output, and you can enjoy the full horizontal resolution!

What should you look for in a projector? The very top end projectors reach a quarter of a million dollars. Fortunately, in the relatively accessible range, the prices go from around \$2,000 to \$25,000. Most of the projectors at the top end are based on DLP chips from Texas Instruments, usually widescreen with a resolution of 1,280 across by 720 down. These produce wondrous pictures.

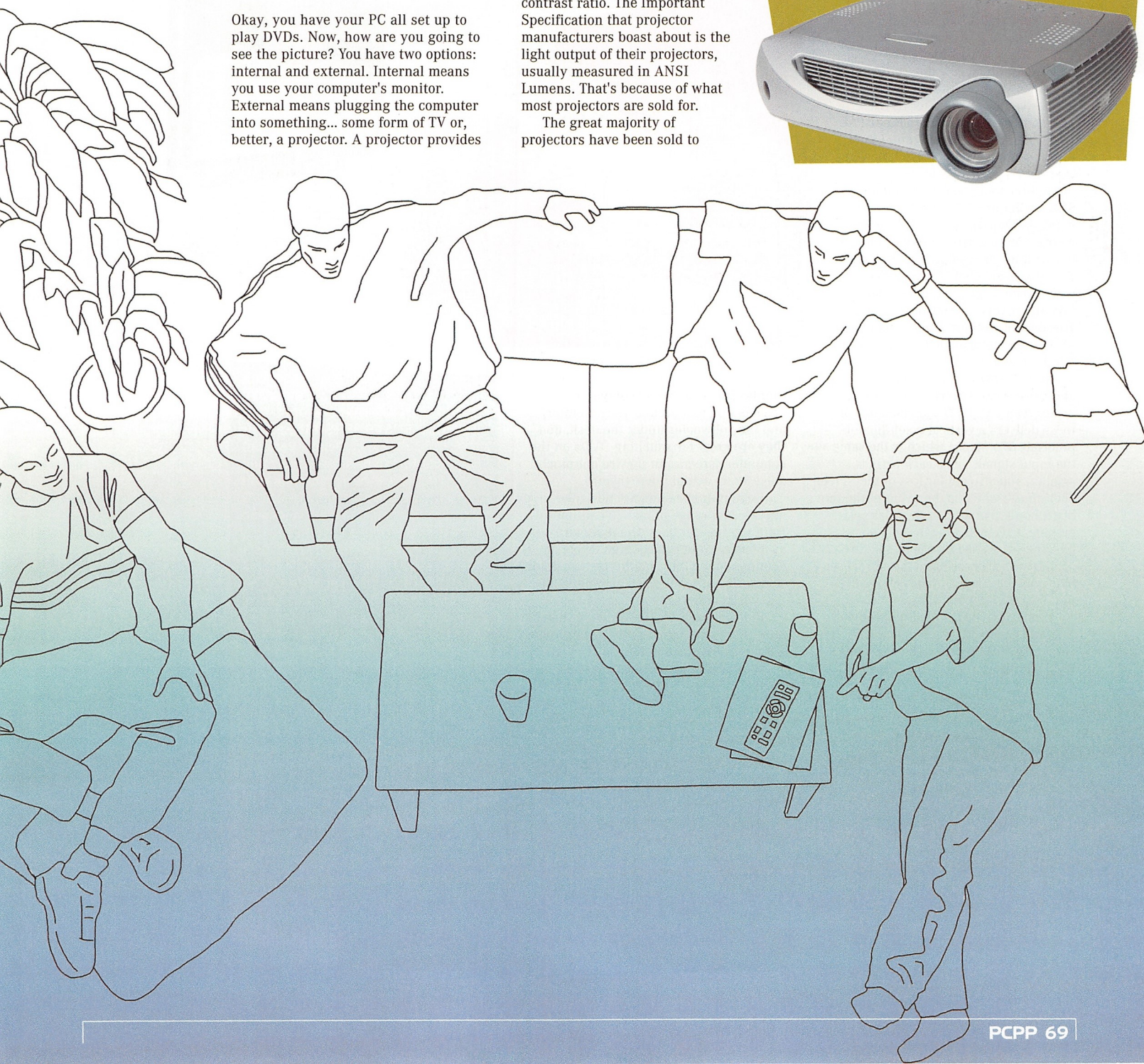
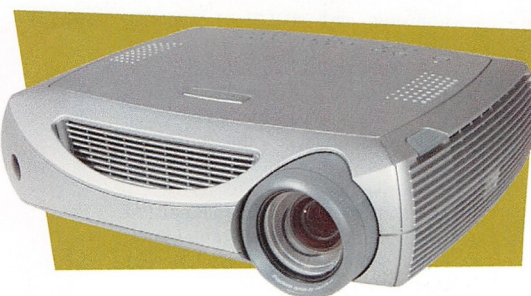
But how about projection on a budget? There are two things to look for here: resolution and contrast ratio. The Important Specification that projector manufacturers boast about is the light output of their projectors, usually measured in ANSI Lumens. That's because of what most projectors are sold for.

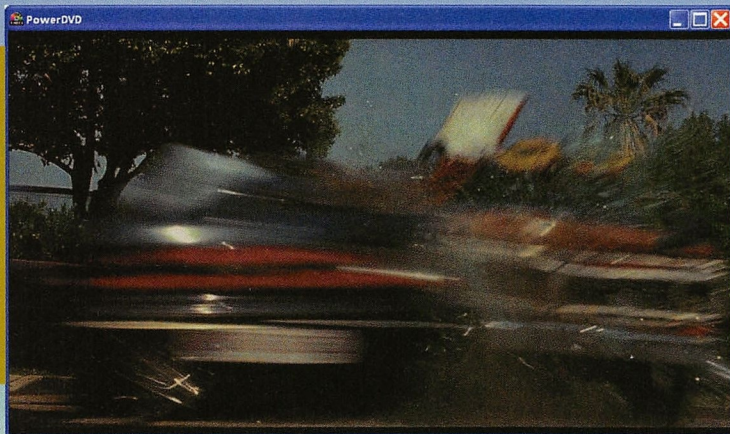
The great majority of projectors have been sold to



people in the business of delivering presentations. They are more often than not in a hired room, or maybe a corporate boardroom, using PowerPoint to present their product or service. In these environments, they often can't place the projector in the ideal place, and there will usually be lights on in the room. The projector has to compete with all that light, and there's only one way of doing it: pumping out stacks of light itself.

Home theatre is different. Here you darken the room. The darker the better. Most LCD projectors deliver well over 1,000 ANSI lumens, and others over 2,000.





Those magnificent \$20,000 home theatre projectors usually offer just 700 or so.

Far more important for the home theatre is a good contrast ratio. This involves getting black parts of the picture as dark as possible. Top DLP projectors manage 2,000:1 or more. Inexpensive LCD projectors manage less than 1,000:1. This isn't as bad as it sounds, but it is still an important specification to consider.

Resolution largely determines the quality of your picture. The least expensive projectors offer SVGA (800x600 pixels). Given that our PAL TV system uses 576 horizontal lines, this sounds ideal. But it isn't, because most DVDs are 16:9 widescreen. Work the figures and you'll find that an SVGA will only deliver a 16:9 picture using 450 horizontal lines. In other words, you're getting a bigger picture, but with lower resolution than a cheap TV! Also avoid some inexpensive widescreen projectors, which deliver just 480 pixels of vertical resolution. These work well for Americans (whose TV system matches that resolution) but not Australians.

XGA (1,024x768) projectors are ideal, if you can stretch to one of these. A widescreen PAL DVD shown on one of these delivers a vertical resolution of precisely 576 pixels, which is the same as the input signal. Since each pixel is smaller, you also get far less of the 'screen door effect', which is the result of the thin black borders around each square pixel, making it seem as though there's flyscreen stretched across the picture.

DLP projectors reduced this effect even more, but they do cost more dollars. Even the cheapest is \$4,000 or more.

Eventually, SVGA will disappear and XGA will be the minimum. It is worth stretching for XGA or waiting just a little longer for the prices to fall within reach.



SOUND

Plunk your 5.1 channel computer speakers on and around your monitor, and the subwoofer under the desk, and they are great for watching DVDs on the computer screen. But they're not much good for an actual home theatre.

Computer speakers are designed to operate at a range of just 70 centimetres from a computer user. Home theatre systems need to project high levels of sound at four times that range. Try doing that with computer speakers and you'll get stacks of horrible distortion.

Instead, we'll look at what you need to tack onto your computer to fill that room with good quality sound.

A top notch home theatre speaker system cannot be had on a small budget. But \$1,500 to \$2,000 can achieve very respectable results. How you go about this, though, depends on how your computer is equipped.

There are two ways of getting the sound out of the computer to the speakers. One is in digital format, the other is analogue. I shall

JBL Simply Cinema SCS 20 speaker system

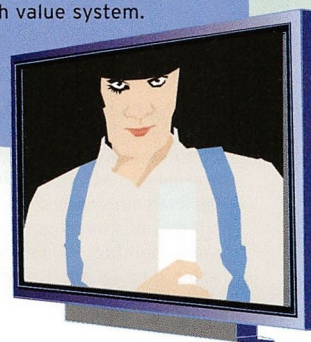
Price: \$1,299

Distributor: Convoy International (1800 817 787)

URL: www.convoy.com.au

This subwoofer/satellite system is just about the best value system around. The five satellites each have a tweeter and two mid-range drivers in enclosures 233mm tall with attractive metal grilles. They are rated at 50 watts power handling and, despite what JBL says, actually produce very high volumes for a given input. The sub has a 100 watt amplifier built in and a 200mm driver. It performs strongly and goes down cleanly (by my measurements) to 31 hertz, which is excellent at this price. Good, clean, room-filling sound from this high value system.

Score: 90%



Cyberlink PowerDVD

Price: \$US49.95 (\$US69.95 for Deluxe version)

Distributor: Cyberlink Corporation

URL: www.gocyperlink.com

Currently up to version 5, PowerDVD provides solid performance and most of the things I like to see in a consumer DVD player. The transport features are good, with single frame forwards stepping (you can go backwards as well, but it only shows about two frames per second of elapsed time this way). PowerDVD is highly configurable, so it is easy to get it to work with any soundcard (or you can pipe out the digital signal for the best decoding). For private watching it includes Dolby Headphone, which makes headphone surround sound quite bearable. The Deluxe version includes software decoding of DTS audio.

Score: 85%



Denon AVR-1603 Home Theatre Receiver

Price: \$799

Distributor: Audio Products

Australia (1800 642 922)

URL: www.audioproducts.com.au

This is the cheapest model available from Denon, but it offers excellent performance and will keep on delivering for years. It is rated at 5x70 watts (with high fidelity figures of 0.08% distortion, not the 10% often quoted for cheap gear). It could deliver up to 100 watts from one channel, 86 watts when running two at a time, and 42 watts with all five blasting away. It can set the crossover frequency for the subwoofer from the standard 80 hertz up to 120 hertz, providing better support for satellite speakers.

Score: 80%



sounds arrive at the correct relative time.

Home theatre receivers feature speaker time alignment, but need a digital signal. Your computer or its soundcard may have an optical digital audio output, a coaxial one, or none at all. If you are relying on the audio facilities built into the computer's motherboard, it probably won't have one, sort of. Many recent motherboards actually do have a digital output (called S/PDIF) which simply isn't wired to the case. You ought to be able to buy an optional cable and add a socket to the case. If you use a hardware DVD decoder, this will almost always have a digital output, as will most recent SoundBlaster and equivalent soundcards.

You may need to configure the driver software for the soundcard and the computer's DVD player software to deliver Dolby Digital 'bit stream' to the digital output (otherwise, it may attempt to treat it as normal PCM audio and run it through its internal processing, destroying the decodability of the signal).

If you do not have a digital output, check to see if your soundcard has 5.1 channel analogue outputs. If your software DVD player can decode Dolby Digital, or your soundcard can do this in hardware, you can get surround sound (albeit without speaker time alignment). But make sure that the receiver you buy has six channel inputs.

The key to buying speakers is to go to home theatre specialist shops, not computer shops, and listen to what they have. The nice thing with going this way is that you can start with cheap speakers and upgrade later, or start with a fine stereo pair and add the centre and surround channels in the future.

Unlike computer speakers, the receiver/home theatre speaker approach allows you to upgrade, piece by piece, according to your finances.



assume here that you want real 5.1 channel sound from suitably encoded DVDs, not just two channels faking surround via some digital processing.

It is far better to go the digital route than analogue. The reason is that 5.1 channel audio decoders that come with computers lack a very important feature: time alignment. Whether you have a top-notch SoundBlaster Audigy with hardware decoding for Dolby Digital, or are relying on the software decoding built into PowerDVD, there is no provision for setting where the speakers are in relation to the listener. They assume that the speakers are all the same distance, but this is generally not the case.

Normally the surround speakers are much closer than the front speakers. This means that the sounds that these speakers produce reach the listeners before the sounds from the front speakers. And this can completely throw off the surround experience, making noises that are supposed to sound like they're coming from the front, actually seem to come from behind you! Time alignment facilities delay the sounds from the closer speakers so that all

RealMagic Xcard

Price: Approx. \$219

Distributor: HoPoint 02 9948 7088

URL: www.hopoint.com

If your computer is a little on the weak side, the RealMagic Xcard is an excellent way of making it play DVDs because the video decoding is in hardware, relieving the CPU of a lot of work. It will theoretically upsample DVDs to high definition - unless they are copy protected, which means it won't because virtually all are copy protected. No matter: watch using the component video or RGB SCART (with optional adapter) outputs, or the D-SUB15 directly to the projector. The picture quality is superb. The coaxial digital audio output will deliver Dolby Digital and DTS directly to your receiver. And it comes with an infrared remote control.

Score: 75%



PUTTING IT ALL TOGETHER

Okay, so now you have your PC, a software or hardware DVD player therein, a projector, a home theatre receiver and some speakers. How do you put all this together? Here are some hints.

If you have a choice, the best digital audio connection between the computer and home theatre receiver is coaxial cable rather than optical cable. I say this not because of some putative audiophile superiority (although, coaxial does mean fewer conversion links in the signal chain), but because coaxial cable is a lot cheaper. Your computer may be some metres from the receiver, and optical cable is expensive. With coax, you just use a decent quality 75 ohm video cable. This is widely available in a good range of lengths and at reasonable prices.

If you end up using 5.1 channel

Common Projector Resolutions

HorizontalxVertical pixels
Aspect ratio
Technology
Recommendation

640x480
4:3
LCD
Poor quality, now obsolete

800x600
4:3
LCD and DLP
Adequate, but scales down resolution of widescreen PAL DVDs from 576 to 450 lines

1,024x768
4:3
LCD and DLP
Very good, excellent performance with widescreen PAL DVDs

852x480 (sometimes 484)
16:9
LCD
Adequate, but scales down resolution of PAL DVDs to 480 lines

1,400x1,050
4:3
DILA (JVC)
Excellent

1,280x720
16:9
DLP
Superb

1,366x768
16:9
LCD
Excellent

analogue audio from your computer to the receiver, you will need to do your audio cabling fairly carefully. Many such systems have outputs that are the flimsy 3.5mm stereo sockets familiar to headphone users. Don't abuse them, and if you have heavy, inflexible cables plugged in, provide some support so that they don't just hang there putting pressure on the socket. Carefully check which channels are which. The subwoofer and centre channel share a socket and it doesn't sound very good if you end up with the subwoofer signal coming out of the centre channel!

Read the instruction manual of your home theatre receiver. These things are complicated. Not only must you time-align the speakers so that the sounds reach you as the movie's audio designers intended, you have to set the size of the speakers and balance their levels. The manual will tell you how to do this.

The size is important because it determines how the bass is managed. If you are using a subwoofer/satellite speaker system, the little satellites won't produce any bass. So the receiver has to be told that they are 'small' so it can peel off their bass and send it to the subwoofer.

The level balancing of the speakers combines with the time alignment to make sure sounds seem to come from where they're supposed to. If the surrounds are too loud, they will drag the 'image' towards the back of the room. If the centre is too low, movie dialogue may be hard to hear. And you

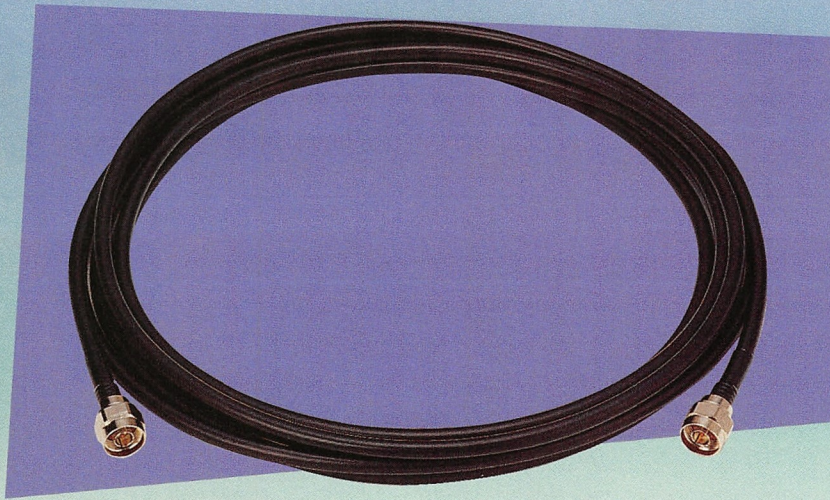
RealMagic Xcard

Price: Approx. \$219
Distributor: HoPoint 02 9948 7088

URL: www.hopoint.com

If your computer is a little on the weak side, the RealMagic Xcard is an excellent way of making it play DVDs because the video decoding is in hardware, relieving the CPU of a lot of work. It will theoretically upsample DVDs to high definition - unless they are copy protected, which means it won't because virtually all are copy protected. No matter: watch using the component video or RGB SCART (with optional adapter) outputs, or the D-SUB15 directly to the projector. The picture quality is superb. The coaxial digital audio output will deliver Dolby Digital and DTS directly to your receiver. And it comes with an infrared remote control.
Score: 75%





must resist turning up the subwoofer too loud, tempting though it may be.

If you use a software DVD player and a projector, the best picture is to be had from your videocard's D-SUB15 output, which is normally connected to your monitor. But that means plugging and unplugging. Easier is to get a manual switchbox that permits the computer to switch between two different monitors or, better yet, a VGA splitter box that allows both to run at the same time. Switchboxes cost less than \$100, splitters more. Either way, you may have to adjust your monitor's viewing mode to allow best compatibility with the projector. If you, like me, run your monitor in UXGA mode (1,600x1,200), the projector may not accept the signal. Even if it does, its scaling down of the picture resolution to XGA or SVGA won't

be as good as running the computer at that resolution in the first place.

For a truly satisfactory playback experience with a DVD, why not reboot the computer before you start? Windows XP is much better than 98 and ME in keeping the operating environment clean, but even so it can accumulate over a period of heavy use, and background drivers and utilities that aren't closed down properly by applications. These can degrade CPU performance. While a 2GHz+ Pentium 4, or equivalent, has no trouble decoding both the MPEG2 video of the DVD and the Dolby Digital audio under normal circumstances, with a lot of junk in place the picture can get choppy and the sound can start to click and pop. So reboot, close down any programs that start up automatically, and get ready to enjoy.



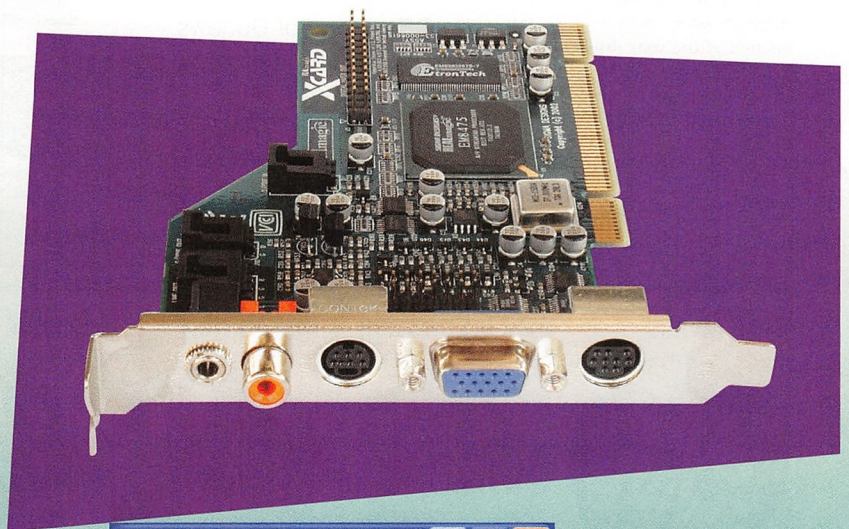
InFocus ScreenPlay 7200

Price: \$15,999

Distributor: International Dynamics (1800 456 393)

URL: www.internationaldynamics.com.au

Okay, I toss this in as bit of a laugh, but this is what the home theatre fan should aspire towards. Give it a few years and this quality may be achievable for just \$5,000. Using DLP technology, the engine is based on a 'Mustang' HD2 chip with a resolution of 1,280x720 pixels in widescreen format. All input signals are supported, including DVI-D, which means the video signal need never have to stray into the (crappy) analogue domain! Superb DCDi video processing from Faroudja, smooth, detailed and utterly convincing performance. And, despite all this, it is luggable. Score: 90%



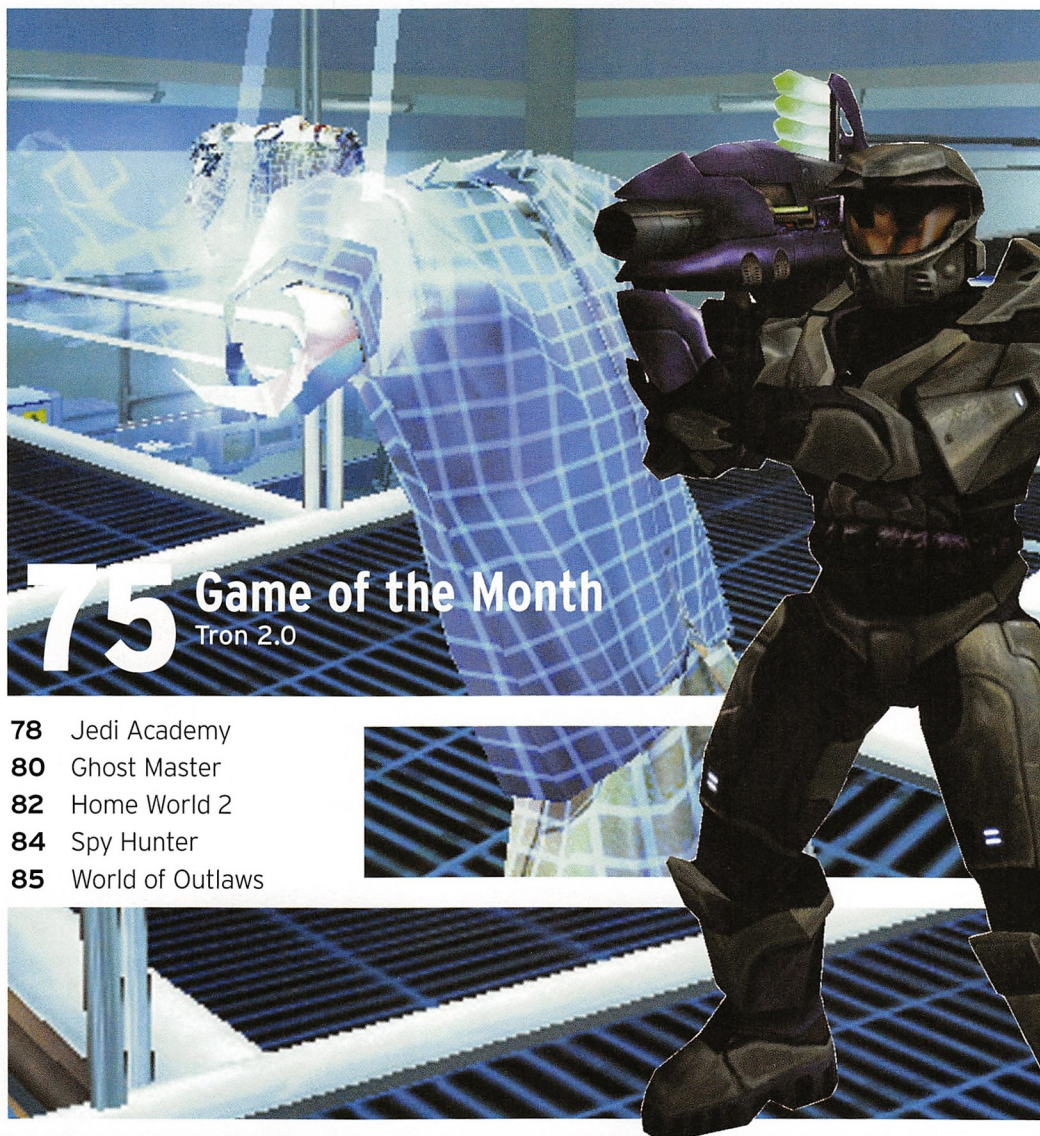
GAMES IN REVIEW

What miserable reading this month's list of reviewed games makes. Not so much in terms of quality but the paltry quantity on offer. Six. SIX! Of course, it wasn't meant to be like this. There was Halo, for a start. Bennett flew to Texas in order to review it, only for Microsoft to decide it wasn't quite ready for release. Now it's slipped to late October. Then there was Judge Dredd, but that's now slipped to November. Rugby 2004 didn't turn up in time. Nor did The Great Escape. Commandos 3 also slipped a month. Chrome and Space Colony both arrived, but neither in a reviewable state. Firewarrior slipped to December. The Athena Sword add-on for Rainbow Six never showed its face either. And don't even get me started on Counterstrike: Condition Zero.

So, what began as a kick-arse four weeks of gaming ultimately disintegrated before our very eyes. It makes sense, though, as several of the former AAA Christmas titles slide into next year (hello Doom 3, Everquest 2, maybe Deus Ex 2), it's inevitable that those late releases would slip closer towards summer.

Still, at least there's Tron 2.0 to tide us over. Sometimes games surprise you; sometimes they turn your expectations completely upside down. Tron is one of the latter. In its own nonchalant, slightly wry and utterly post-modern way, it's the best shooter of the year thus far. Half-Life 2, Call of Duty and Far Cry are going to need to be pretty special in order to steal Tron's gleaming virtual crown. Who knows, maybe they'll even turn up here next issue...

David Wildgoose
Editor



- 78 Jedi Academy
- 80 Ghost Master
- 82 Home World 2
- 84 Spy Hunter
- 85 World of Outlaws

GOLD AWARD



The ultimate accolade. A game that receives a Gold Award is an essential purchase, and the only excuse for not owning it is either not having a powerful enough PC, or not having a PC at all. Or arms. It represents a new direction in gaming, a new benchmark against which all others will be measured. It defines its genre, or creates a new one. It is gaming. You must own it.

90+

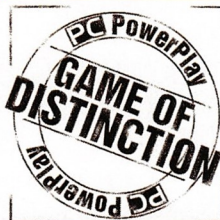
HIGH DISTINCTION



This is the finest in gaming. A fresh concept, a perfect execution, a meaningful extension to a tried and tested format, one or all of these are required for this score. We strongly recommend the purchase of each High Distinction game, but extremely fussy gamers may want to skip those HD games that don't also receive Gold Awards.

85-100

DISTINCTION



An intriguing new concept or a bold new direction that manages to pull its new trick off with a reasonable degree of flair. You will be impressed, at either the graphics, the gameplay or some other new element that you may not have encountered before. Or perhaps this is a familiar gaming concept, but one executed so well it's almost - but not quite - an essential purchase.

75-84

CREDIT



Solid, playable, largely bug-free, entertaining and maybe even a bit unexpected, these are the hallmarks of a game of Credit. You may have seen it all before, but you won't mind, because a Credit game does what it says on the box - it plays well and it keeps you hooked. An essential purchase? Not necessarily, but worth consideration.

65-74

PASS



A game that receives a pass is playable, but its concept may be flawed, its extras may be lacking or its graphical enhancements may have fallen off somewhere in a lengthy bug-fixing process. And bugs there may be, although in the end the game will, as we say, work. Purchase if you're curious, but discerning gamers will probably look for something more substantial.

50-64

FAIL



There are more than 5000 games released each year. Some are gems. Some are merely unremarkable. Others are nothing more than a shameless grab for cash. Graphics will be rudimentary and gameplay will be worse. If you see someone considering a game that has failed, gently take them by the elbow and hurl them out of the shop. It's your duty as a good citizen.

0-49



Developer: Monolith ■ Publisher: Buena Vista ■ Distributor: EA ■ Price: \$89.95 ■ Rating: M15+ ■ Available: Now

It's a simple fact that game reviewers enjoy reviewing games based on movies - not because you're guaranteed a good game but quite the opposite in fact. We enjoy reviewing licence games for the simple fact that they usually let us vent all of the frustration built up over the course of the week (Arxel tribe games offer a more extreme form of this relief but are only recommended for seasoned veterans with cast iron stomachs and nerves of steel). We're used to licence games either being extremely disappointing or just downright bad, so what are we to do when a game turns out better than the source material? When the heroic geek Flynn (Jeff Bridges) and titular security program/programmer, Tron/Alan Bradley (Bruce Boxleitner) defeated the evil Master Control Program 21 years ago they didn't exactly set the world on fire, barely breaking even at the cinemas and only just doubling it's 17 million dollar budget in the last few years. Although an incredibly interesting film visually, Tron suffered from a muddled storyline, generic characters and no real sense of purpose. Tron 2.0 suffers from none of these problems, instead delivering one of the greatest FPS experiences in recent years by combining great action, the now ubiquitous stealth elements (thankfully, well done and brief), RPG-like interaction, platforming (we

know some of you hate jumping puzzles but these are within context), fantastic weapons and the most unique and beautiful graphics to come along in a long while.

You believe in the users?

The story of Tron 2.0 kicks off some 20 odd years after the events of the film. The defeat of the MCP is all but a memory and Alan Bradley has finally perfected the digitising technology (responsible for sending Flynn into the computer in the film). Unfortunately for Bradley, his achievements are overshadowed by crisis - his company is heading into the toilet with a large and evil corporation looking to take over so they can use the digitising technology for their own nefarious means and Ma3a, the AI controlling the digitisation process has been infected with a virus by a rogue user named Thorne. When Alan Bradley goes missing under suspicious circumstances, a worried Ma3a digitises Jet Bradley, Alan's son and a computer genius in his own right (in the field of game design), to eradicate the virus,

discover what happened to his father and uncover the mystery surrounding something called the Tron Legacy. Unlike most first person shooters, Tron 2.0 doesn't simply deliver the plot in a linear fashion. Although there are cutscenes at the beginning and end of each level, the majority of the plot is hidden across the 30 levels in the form of emails and video files that can be downloaded, making exploration a truly rewarding experience.

Also scattered around the levels are Apps that can be downloaded and installed in Jet to improve his abilities, much like the nanotech in Deus Ex. Unlike Deus Ex however, Tron 2.0 allows players to switch installed Apps mid-game so you can always try out new programs, switch weapons, armour up for boss battles or what have you. Each App has three levels of proficiency, Alpha, Beta and Gold, with Alpha being the weakest and most system intensive taking up three skill slots and Gold being the most powerful and economical, taking up only one skill slot. The usefulness of these Apps ranges from very to

SYSTEM

NEED
P3-500MHz
256MB RAM
32MB 3D videocard
2.4GB HDD

WANT
P4-1GHz
512MB RAM
128MB 3D videocard
2.4GB HDD

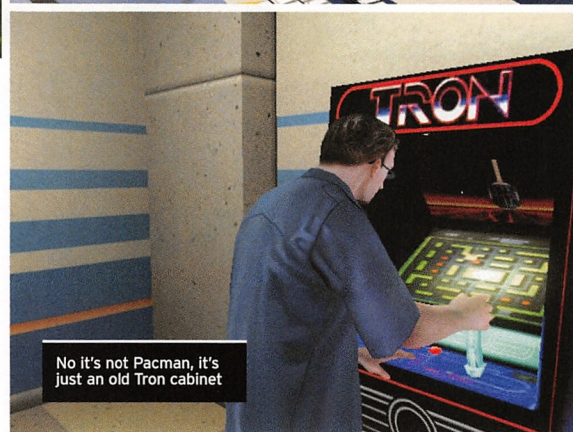
MULTIPLAYER
Yes

ONLINE
jeffbridges.com
The site, the man,
the legend.

While exploration and puzzle solving are important aspects of the game, there is more than enough action to keep all but the most twitch-oriented gamers happy



This is what happens when you share files illegally



No it's not Pacman, it's just an old Tron cabinet



Press keys to make selection
Continue basic training
(recommended)
Basic training

not at all but you'll feel compelled to try them all on for size. Different Apps include the ability for Jet to jump higher, see enemy names, designations and health, increase the amount of damage done by "Primitives" and to guard against virus infection. The ability to guard against virus infection is one of the most useful throughout the game as contact with Thorne's minions can corrupt different Apps, making them unusable until they are quarantined and scrubbed. Worse yet, if you ignore viral infestation for too long, Jet himself can become infected, effectively killing him and ending the game.

Each level also contains a number of build points (gained through finding secrets and completing objectives) that can be used to level up Jet's abilities RPG style. Initially, Jet starts out as a lousy v1.0.0, but with enough build points he can raise his version

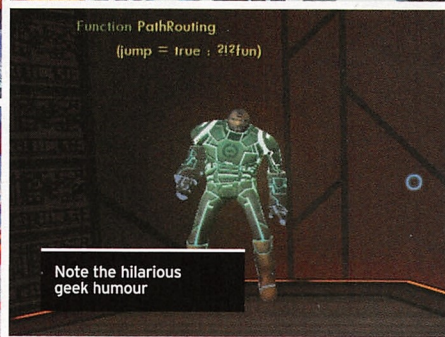
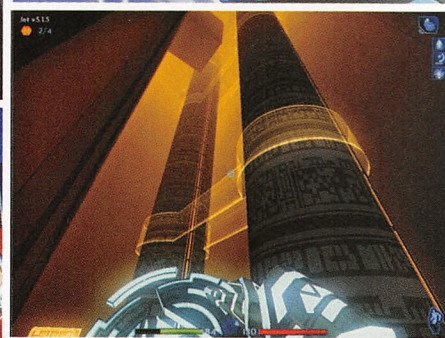
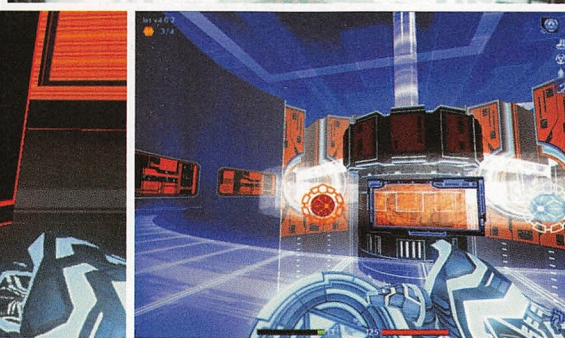
number, and each time the first digit ticks over its time for a stat upgrade. In this manner you can increase your health, energy (used for powering weapons and downloading programs), weapon efficiency, transfer (the speed of downloads), etc.

Action speak louder

While exploration and puzzle solving are important aspects of the game, there is more than enough action to keep all but the most twitch-oriented gamers happy. Enemies aren't as varied as most FPS players would expect, but this is made up for by the excellent AI and the fact that they're all so well designed and funny (in a geeky kind of way). The first enemies you'll meet are virus-infected programs that look like glowing yellow zombies and security countermeasures (the red guys from the

WARNING! SYSTEM OVERLOAD

Tron 2.0 is without a doubt one of the best shooters to be released in the last couple of years, but it's not without its faults, namely the abundance of jumping puzzles. Though they are in context within the framework of the game, such as jumping across the floating-point gap in a processor or making your way across a fragmented data stream, they can become bothersome when you progress further into the game and they become more complex. If you have a short attention span or temper you might want to get some counselling before buying the game. You have been warned.



film) led by the Kernel, but later you'll come across Data Miners and System Hogs, the latter being programs so bloated with unnecessary code their very presence is bad for the computer as they use far too many clock cycles. Each "Primitive" the players has (basic weapons and building blocks for more advanced models) can be upgraded to a number of other weapons. The basic weapon, the Disc "Primitive" is the most useful and ultimately cool weapon. A Frisbee by any other name, the Disc can be banked off walls or used to shield Jet from incoming Discs.

REVENGE OF THE NERDS

Tron 2.0 is a game about computers written by people that know about computers whereas Tron the movie was a movie about computers written by scriptwriters. The difference in the scripts shows as 2.0 is a very computer literate game with some brilliantly designed levels including one in which you have to overclock a computer so it can handle running Ma3a, and another in which you have to stow away in a regular transport (email) to escape from security protocols. This latter mission also contains the funniest joke in the game when a stewardess warns passengers that in the event of a transport packet loss, all programs have been issued with an emergency sub-mask!

Upgrades for the disc include an exploding version as well as a rapid-fire version. The Rod "primitive" is the most varied weapon. Its initial form is that of the handlebars of a Light Cycle that can be broken in half to create two impromptu cattle prods. Further upgrading can turn the Rod into a shotgun-like weapon or the best named weapon in the game, the LOL, a high-powered digital sniper rifle. The final "Primitive" is the ball, a gooey mass of yellow used like a grenade. Although it looks very cool, the Ball is relatively useless, unless your timing is impeccable and your aim is nothing less than uncanny.

Aside from the shooting there is also Light Cycle racing to keep punters interested. Light Cycles (for those half dozen of you unfamiliar with the concept) leave a solid trail behind them and can only turn at right angles and racers strive to cause the other riders to crash into their trails. Although it sounds fairly straightforward, Light Cycle racing is a surprisingly satisfying and deep experience, more of a full game, in and of itself, than simply a mini-game. Thankfully, Monolith have integrated a full Light Cycle game into Tron 2.0 - instead of waiting for races to come up in the course of play, players can jump right in from the start menu and work their way through a large number of races, each with different levels of difficulty and special conditions. Monolith has also included Light Cycle racing as one

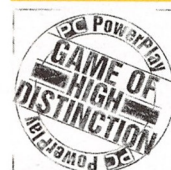
multiplayer option of note is the one-on-one Disc matches, which offer a real change of pace from the typical deathmatches. Although not for everyone, Disc matches are a refreshing change of pace.

From celluloid to digital

Tron 2.0 is a beautiful and surprisingly system friendly game, looking great even on a lower spec machine. Monolith have faithfully recreated the look of the film and taken it to the next level by adding an impressive feeling of height and depth through the use of transparent/translucent floors or ceilings showing data flowing off into the distance. Character animation is top notch and weapon effects look fantastic. Although not quite up to speed with the Unreal 2 or Half-Life 2 engines, Tron 2.0 looks as good as you could want a game to and even features an exclusive effect created by NVIDIA especially for the game called, strangely enough, Tron Glow, giving all characters and objects a glowing, slightly diffused look much like the film. Sound design is equally good with a great soundtrack and effects and a top-notch voice-acting cast including Bruce Boxleitner reprising his role as Alan Bradley and supermodel turned not-so-super actress and failed sitcom star spouse, Rebecca Romijn-Stamos, as the feisty Light Cycle champion Mercury.

Daniel Wilks

RATING



FOR

graphics look incredible
Great plot
Rewarding

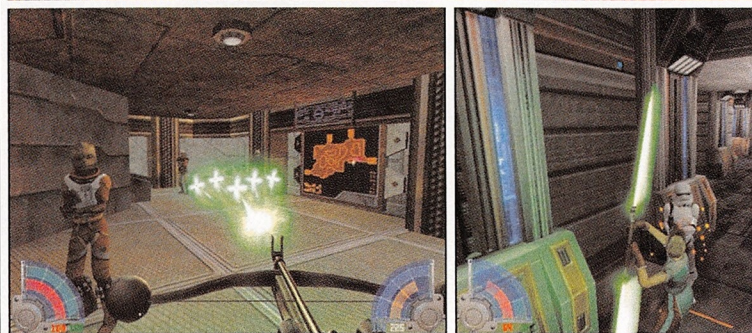
AGAINST

Jumping puzzles
Not enough enemies
Too easy in parts

OVERALL

Without a doubt one of the best shooters to come along in the last few years

90



Jedi Knight 3

Jedi Academy

Abuse the Force, Luke

Developer: Raven ■ Publisher: Activision ■ Distributor: Activision ■ Price: \$89.95 ■ Rating: M15+ ■ Available: Now

SYSTEM

NEED

450MHz CPU
128MB RAM
3D Hardware
Accelerator
DirectX 9.0
1.3GB HDD

WANT

1.2GHz+ CPU
256MB RAM
GeForce3 or better
EAX soundcard

MULTIPLAYER

Yes

ONLINE

www.handlebarclub.org.uk

To qualify for membership, the Handlebar Club requires you to possess "a hirsute appendage of the upper lip with graspable extremities." If your fuzz extends beyond the mo', then jump back, fella, 'cos no beards allowed

Calling Jedi Academy by its full name and lineage, Star Wars: Dark Forces 2: Jedi Knight 3: Jedi Academy will give you some idea of the originality of Raven's new title - if you've played any of the previous Jedi Knight games you've already seen what Academy has to offer. This may sound overly harsh but after having our expectations raised by the press releases promising a whole new Star Wars experience, Jedi Academy turns out to be little more than an expansion pack for Outcast. Is it a bad game? No. Is it fun? For the most part. Is it another example of

MULTIPLAYER

Much like the rest of the game, Jedi Academy multiplayer is initially fun, but essentially forgettable. Although it basically plays identical to Jedi Outcast, Academy does have some nice new maps featuring multiple levels, hidden areas and open spaces perfect for saber duelling, arguably the most enjoyable aspect of the multiplayer game. The bot support for the bot match feature is quite good with each different character having different tactics and movement styles. Turned up to Jedi level, these bots pose quite a challenge.

Raven making a lazy game? You bet. The first example of Raven's lack of effort comes even before the player is introduced to the plot. Although able to choose from a number of skins, which include a male Rodian (Greedo, the green guy Han shoots in the Mos Eisley cantina is a Rodian), female Twi'lek (the guys with the head-tails) and your typical humans, no matter what you choose the outcome is the same - a character called Jaden who sounds like they just jumped off a surfboard in Southern California. That's right - there are only one name and two different voices in the entire game. This may sound like a petty gripe, but according to Star Wars lore, neither Rodians nor Twi'lek speak basic (English) - Rodians can't and Twi'lek just don't want to. I guess we can thank our lucky stars that Raven didn't see fit to include a Wookiee character that sounded like they're fresh out of the Valley.

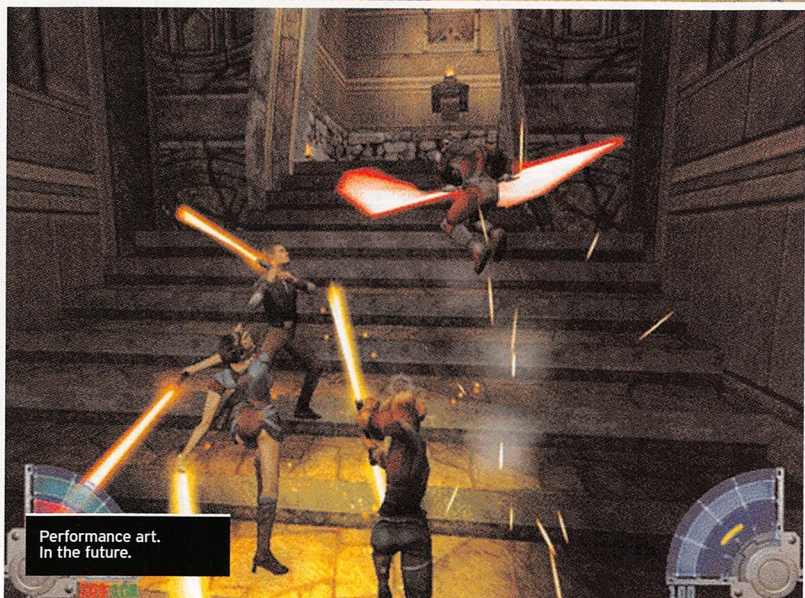
As far as the plot is concerned, Academy is fairly straightforward material. The non-gender specific Jaden is

something of a Jedi prodigy, building his or her own light saber before being noticed by the academy. En route, some nasty dark side types who are using an ancient Sith artefact to drain the residual force powers from objects and places shoot down the transport. Ultimately, it's up to Jaden, under the tutelage of Kyle Katarn to uncover what's going on, kill around 3 million dark Jedi and ultimately save the universe from something that doesn't seem particularly life threatening in the first place. Skip the next couple of lines if you don't want any spoilers. Why is everyone afraid of a dark Jedi resurrecting a dead Sith Lord - the guy's already been killed once and the simple fact that he can be beaten by a Jedi fresh out of the academy doesn't make him sound like a threat to the entire galaxy.

Great kid, don't get cocky!

Gameplay wise, Jedi Academy plays nearly identical to Jedi Outcast with a few minor cosmetic changes. The most

Every now and then the AI is unbelievably stupid, running off cliffs and doing things like dropping a thermal detonator at their feet.



styles. Weapon skins look nice for the most part, but their effects leave a little something to be desired. Once again, Raven has chosen to incorporate character deformation during saber combat, but after the umpteenth arm is cut off you'll find yourself wishing that other body parts could be cut off to mix things up a bit. On the sound front, Academy is a mixed bag. The score and sound effects are vintage Star Wars and very evocative of mood, really helping to redeem some of the duller missions, but the voice acting is a different matter entirely, ranging from really okay in the case of Kyle Katarn to terrible. No matter which sex you choose, Jaden ends up sounding like a cross between a dumb surfer and that kid from school who thought they were better than everyone and you hated them for it.

Although not a bad game, Jedi Academy comes across as a lazy, uninspired and, ultimately, by the numbers approach to the Star Wars universe.

Daniel Wilks

obvious difference and ultimately most disappointing is the missions hub. After each plot specific cutscene the player is taken to a mission hub screen, giving them a choice of five missions to choose from. Initially, this looks like it will give the game a massive amount of replay value but pretty soon you'll realise it's just a pretty and shiny thing that tries to obfuscate the fact that the game is still painfully linear. Although you are given a choice of missions you still have to complete four of them to trigger the next cutscene and you'll be advised to complete the fifth before returning to the academy. There's little point in offering players a choice of missions if you've got to complete them all in the long run - more effort could be put into the game itself instead of adding a veneer of non-linearity. Fortunately, most of the missions are well structured with some nice looking maps with a good flow to them and some nice touches, such as one of the later missions that sees Jaden on the run from a mutant Rancor that destroys everything in its path, including its allies. For the most part AI is fairly solid but every now and then it will act in an unbelievably stupid way, not reacting when you kill the person right next to them, running off cliffs and a personal favourite (seen more than

once), dropping a thermal detonator at their feet and launching themselves off the side of a building.

Polishing the sabre

Much ado has been made about the improved light saber combat system and the final result is something of a missed bag. When given the option between single and dual sabers you'd be hard pressed to find a reason to use the single blade. In short, dual sabers rock the house. They're also way too powerful, effectively giving the player a damage radius that can nearly instantly kill anything standing within arm's reach. The dual sabres also show the single coolest animation in the game, providing you meet the right conditions - run up between two enemies using Force Speed and you'll thrust each arm out, skewering both enemies in a single slow motion move. On the flip side the two handed, Darth Maul style saber is next to useless as it doesn't seem to block incoming shots well, it's slow and instead of a throw the player had to put up with a pointless kick.

Although running on the now very old Quake 3 engine, Jedi Academy looks fairly good with all the settings put to high and volumetric shadows turned on. Character animations are top notch with a good array of combat moves for the various saber

RATING



FOR

Dual sabers are cool
Some good missions
Soundtrack

AGAINST

Uninspired
Glossy but shallow
Terrible Jaden voice acting

OVERALL

As a board game, it would have rocked. On PC, it's totally obscure.

TOO LITTLE TOO LATE

Towards the end of the game, Jaden is given a choice to turn to the dark side by giving into his/her rage, and killing a friend in need of rescue. Unfortunately, I was not able to play through the last section of the game as a dark Jedi after completing it as a good Jedi, as the code needed to be returned to Activision but you have to question whether this is too little too late. By the time you make the choice you've already completed three quarters of the game - even if the final missions are different, it doesn't really add to replayability. The fact that you can easily finish the game in 10 hours without breaking a sweat doesn't particularly add to its charm either.

68



Ghost Master

The lighter side of black humour

Developer: Sick Puppies ■ Publisher: Empire Interactive ■ Distributor: Vivendi ■ Price: \$89.95 ■ Rating: TBA+ ■ Available: Q4 2003

SYSTEM

NEED

P3-500
128MB RAM
16MB Direct3D
4 x CD-ROM
700MB HDD

WANT

P3-1.2GHz
256MB RAM
32MB Direct3D
1GB HDD

MULTIPLAYER

No

ONLINE

hollowearth.co.uk
The Hollow Earth theory where a much better world exists, hidden by the American CIA and told to me by a taxi driver last night. Is it possible that the high incidence of conspiracy theorists amongst Sydney taxi drivers is in fact some kind of weird conspiracy? Ahhh... shoot me.

If you've got a penchant for scaring the shit out of people, but tend to wind up with a black eye or fat lip every time you don the Scream mask and creep around your local dark alley, this is the game for you. Developed by Sick Puppies, Ghost Master can be best described as The Sims meets Beetlejuice, which, surprisingly enough, works quite well. The game puts you in the shoes of the ghost of a deceased civil servant who has been sent to seek out supernatural activity in the town of Gravenville (that name's just glowing with creativity!). Ironically, your goal in Ghost Master is to scare away all human activity in the town using a variety of both cliché and far-fetched methods, which range from copious amounts of spiders dropping from the ceiling, to bleeding walls, to simply tampering with the lights.

All aspects of Ghost Master revolve around light-hearted fun, with the menu system being based around a Halloween-like theme (complete with Scooby Doo soundtrack) and the introductory movie featuring a number of vulnerable humans sitting around a Ouija board - can't get much more clichéd than that, folks! As well as this, there are a number of unmistakable references (or cases of intertextuality, for the scholars) to classic

films such as Ghostbusters, Usual Suspects, Calamityville Horror, and many more. Furthermore, humour is used liberally throughout the game, which is apparent even from the intro movie that ends with a group of ghosts playing pool and sipping cocktails in someone's now vacant kitchen.

The front door not the stairs!

At the start of the game, the amount of functions and spells on offer may be initially bewildering. However, fans of The Sims are sure to feel right at home here, with a familiar aerial view of the house, as well as symbols above the inhabitants' heads to indicate mood and state of mind (their 'scared' meter). Similarly, the tutorial level, aptly named Haunting 101, gives players a good insight into the mechanics of the game, and the fact that each mission begins with a fly-over and briefing allows you to jump straight into the action without having to paw through the manual.

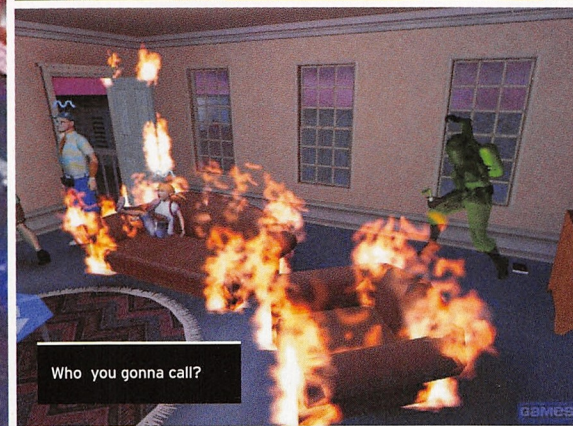
Before heading into each mission, the player is required to select between four and eight ghosts from six different classes (with the higher classes being more expensive to operate due to their high plasma usage). Put simply, plasma is the limiting factor on the amount and type of

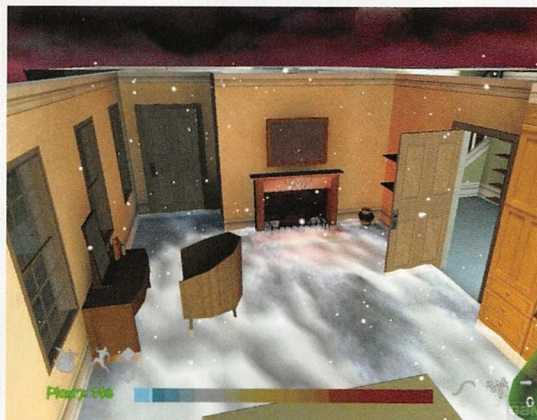
ghosts/spells you can use and thus, the more the merrier. Although your plasma level decreases at an increasing rate depending on the type of spell performed, it will slowly but surely rise as you continue to frighten people. Furthermore, you are awarded with a gold plasma value at the end of each level, which can be traded for new skills in the Ghoul Room. It is important to note that while it is certainly worth

AI

Even if you didn't extract pleasure out of wreaking havoc in the lives of your Sims, there's still a good chance that you'll enjoy Ghost Master. The game features excellent AI routines, allowing you to simply sit back and watch the inhabitants of each house go about their day-to-day activities.

Additionally, even when you do scare them witless, you won't find anyone huddled up against a wall or running around in circles/into other inhabitants either. Yes, AI and waypointing has certainly evolved since the early versions of POD-bot for Counter-Strike (ahh, the memories).

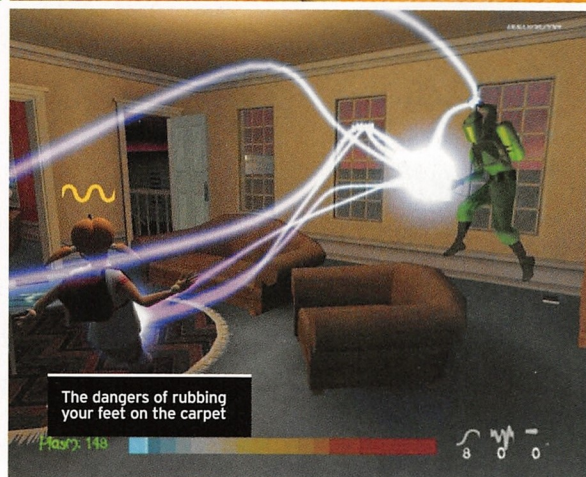




GET YOUR FREAK ON

While there are simply too many powers/spells to mention in this review (140 to be exact), there were a few stand-outs that are worthy of a mention. A personal favorite of ours is the "possession" spell, allowing you to enter a mortal body and build their belief levels (very entertaining), as well as the "dream" spell, which allows you to enter the mind of a sleeping mortal to uncover or exploit fears. Other spells include the noise/stench powers that can be used to attract attention, or in the case of the latter, utterly disgust, as well as the "nature" spell which harnesses the obnoxious power of plants in order to obstruct and scare.

Throughout the game you'll have the chance to play through a total of 14 different scenarios, with missions ranging from scaring a group of sorority girls (who are naturally all running around in their underwear), to manipulating a group of people into summoning more ghosts for you to control. The fact that not all missions require you to scare the



directions, as well as rotate the camera on any angle using the mouse while zooming in and out with the mouse wheel. In addition, you can also view the world from the eyes of each ghost/human, and the inhabitants' terror, madness and belief levels can each be conveniently monitored simply by clicking on the person's on-screen icon. The same goes

for each of your ghosts, which can be manipulated through a similar menu-like interface.

Although the graphics in Ghost Master aren't exactly

astonishing (read: The Sims level), this certainly doesn't lessen gameplay and with a complete 3D environment, as well as extremely pretty spell effects, there really isn't much you're missing out on. As far as sound goes, again, this game borrows greatly from The Sims, with similar indistinguishable gibberish being spouted by the inhabitants, as well as hilarious voice acting - think Royal Easter Show haunted house and you'll know exactly what we're on about!

Overall, despite these petty complaints, Ghost Master is nevertheless a highly playable, fun game, with its pros certainly outweighing the cons. Although it heavily borrows from The Sims, Ghost Master's originality and humorous nature is a godsend in today's world of the monotonous WW2 shooters, and the great sound and graphics effects enhance the gameplay experience tremendously. The bottom line is, if you enjoyed boxing your Sims into a doorless room, watching them soil themselves from incontinence, fright, or both, then you're certainly in for some entertaining, if not, long-lasting fun with Ghost Master.

Asher Moses

Ghost Master revolves around light-hearted fun, with the movie featuring vulnerable humans sitting around a Ouija board - can't get much more clichéd than that, folks!

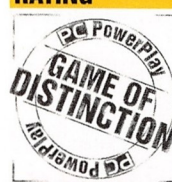
customising your team of ghosts to suit your individual sadistic scare-fetishes, the game can also recommend a team of ghosts if need be.

Not only is Ghost Master a Sims game, but it also features some elements of RPG and strategy. Specifically, the more you use your team of ghosts (which obviously increases as you progress), the more their skill and training levels rise. However, while keeping this in mind, it is important to choose your ghosts carefully, as each has its own individual specialty or skill. For example, while gremlins work with electrical appliances, sandmen scare people through their dreams and, thus, need to be positioned near a bed. In the game, this skill is known as a 'fetter', and ghosts need to be binded to objects which match this fetter in order to be visible to humans. In total, there are 140 different spells on offer (see boxout), and 47 different ghosts with unique looks and personalities to choose from. This wide variety removes the monotony we had expected previous to playing, however, don't be surprised if you wile away the hours simply experimenting with all of the different ghost/spell combinations.

inhabitants out of a house is a nice bonus, and the added element of strategy in positioning your ghosts to manipulate your victims in a certain direction is certainly a welcomed challenge. Furthermore, the extra sub-plots, which usually involve freeing captive ghosts to add to your arsenal, add some extra play time to an otherwise short-lived game. And that neatly brings us to our next point - game length. While its sub-quests do redeem Ghost Master somewhat, it would certainly have been nice if there were a couple of extra scenarios added into the mix. As well as this, there is no sign of a level editor, and the lack of multiplayer is also quite disappointing, albeit, this would have been fairly difficult to implement given the nature of the game. When grouped together, these factors seriously limit the replay value of Ghost Master, detracting from its appeal somewhat.

However, having said all that, as hinted at earlier, Ghost Master's user interface and control layout is simply superb. Firstly, the camera system that Sick Puppies has adopted is very effective, in that players have the ability to shift the camera view right round an object in all

RATING



FOR

Highly original
Humorous fun
Well-designed interface

AGAINST

No level editor
No multiplayer
Fairly short-lived

OVERALL

Ghost Master is a fun, highly original game that is somewhat let down by its abrupt ending

76



Homeworld 2

Boldly go where we were four years ago

Developer: Relic ■ Publisher: Vivendi ■ Distributor: Vivendi ■ Price: \$89.95 ■ Rating: M15+ ■ Available: Now

SYSTEM

NEED

P3-667
128MB RAM
64MB videocard
750MB HDD

WANT

P4-2GHz+
256MB RAM
GeForce4
750MB HDD

MULTIPLAYER

Yes

ONLINE

www.larryniven.org
Since Homeworld 2's graphics look like every cover of Niven's novels, it seems fitting to point people to his website. Big ships, big space. All good.

So here we are again, in 3D space with a whole bunch of ships that look like they've just popped off the covers of any of the six thousand classic 70s sci-fi space operas. We've got amazing nebula effects, a somewhat different RTS methodology, haunting music and groovy anime-style

FUELLING THE FLAMES

One notable omission from the original is the fuel gauge on each ship. Relic quite rightly identified that fuel was just a pedantic and irritating inclusion in the original game that left dozens of ships in each battle stranded beyond any hope of retrieval. Rather than something that enhanced the strategy, fuel just annoyed. Fans will therefore be happy to know that ships can literally go all day, just like in a more traditional RTS, which makes battles faster, easier to manage and, most importantly, much more violent.

cutscenes. We have, in short, the original Homeworld game all over again.

To be fair, most sequels are basically graphical updates of the previous game with a few new concepts thrown in. Doom 2 is a classic example, and in the RTS field, every Command & Conquer title seems pretty much the same except for better graphics.

And yet, if you take the time to delve into some of these sequels you realise the core gameplay has actually changed or been fundamentally altered in some way, so the successful sequels are those that bring gamers into a familiar space and then turn that space on its head with a bunch of new concepts.

The Third Core

Then there are sequels like Homeworld 2, which see the sequel situation as a good opportunity to correct all the gameplay errors the developer made in the first title. Confusing 3D navigation is further streamlined. Fuel is discarded as unnecessary. More icons on the game screen make selecting ships easier. Running at a higher resolution no longer makes the in-game menus teeny tiny.

First and foremost,

the graphics have been comprehensively overhauled, although you'd be forgiven for not immediately noticing. Each ship is now much more detailed, with higher resolution textures, more moving doohickies such as turrets and manipulator arms, and greater geometric complexity. There are also neater special effects, such as the pulsating blue goo of a defensive field.

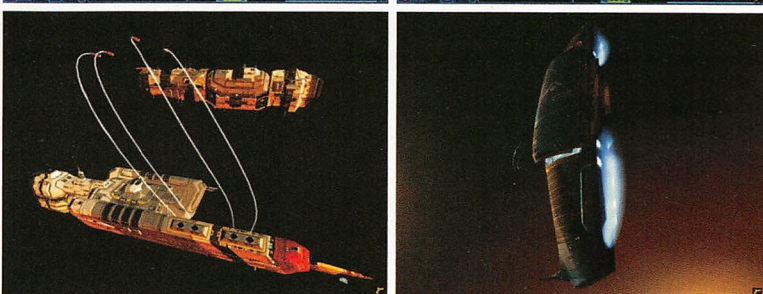
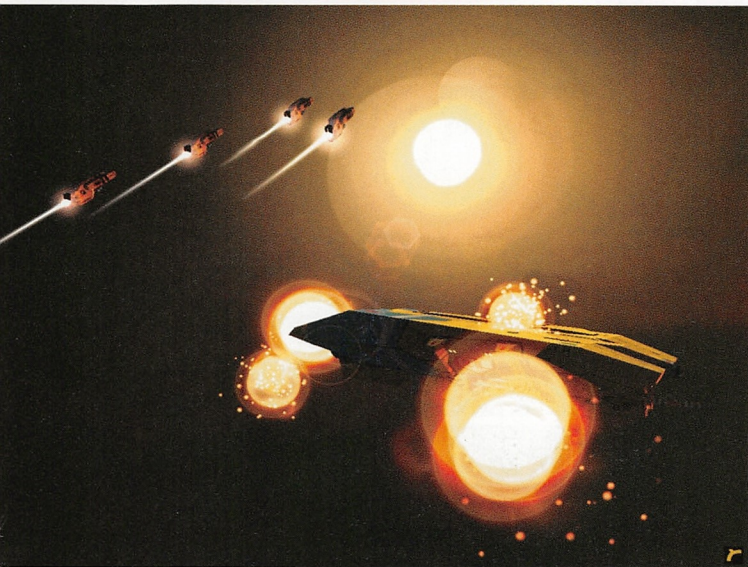
Yet when you first boot up Homeworld 2, you may immediately mistake it for the original. While the graphical overhaul is comprehensive it is only in line with other developments across the industry - you actually need to install Homeworld and have another look to truly appreciate how far the graphics have come.

Of course, the other issue with graphics is that any additional detail is mostly wasted, since you will spend most of your time in an extreme zoomed-out view to take in all the action. Fortunately, Relic has identified this and now each group of ships has a 'flag' marker, similar to the banners in the Total War games. Clicking on the flag selects the whole group and orders can be issued accordingly.

Total (Space) War

Also, unlike Homeworld, fighters, bombers and corvettes are no longer built individually but appear in groups of three or

The feel of the game is of a slightly smaller scale version of the Total War games, only it's set in space of course...



BRIDESHEAD REVISITED

A tenuous boxout title perhaps but the fact remains that the story of Homeworld 2 is pretty much identical to Homeworld, except this time the mother ship is running AWAY from the homeworld in question as the Hliigara system falls prey to the evil Vaygr. That's right, in the proudest tradition of space opera, the baddies are bad simply by dint of having a vaguely evil-sounding name. There are various neutral and friendly factions as well, and it amazes me how there are so many enormous space ships in the Homeworld 2 universe when people keep blowing up half a dozen of them every thirty minutes.

five. This dramatically reduces the amount of tedious clicking on build menus and puts more ships into the action more quickly, which results in a more spectacular fire-fight.

The formations system has also been dramatically simplified. It's no longer necessary to painstakingly assign formations to each squadron depending on what task you have in mind for them.

Ships are now more self sufficient in combat and the focus is now off micromanagement and on overall strategy.

The feel is of a smaller scale version of the Total War games, set in space of course. Small squads battle it out around cap ships, which are still controlled individually. There are now a greater range of cap ships, with such inclusions as the Marine Frigate which can capture other cap ships in a more believable fashion than the tiny ship capturing corvettes of the original game.

More goodies!

In multiplayer games, by default each player now starts with a mothership and a carrier, as well as four resource collectors. This allows multiplayer games to get off to a much quicker start, and the second construction ship (the carrier) spices up the strategy and makes it far easier for

players to deploy forward bases.

Combined with the abolition of fuel limitations, it all makes for a much more intense gaming experience compared to the at times soporific pace of multiplayer in the original.

And yet at the end of the day it's difficult to feel that you're getting too much new stuff in this sequel. Part of the problem might be the nature of the combat itself - irregular textured polygons dancing with death in the blackness of space is not exactly a recipe for immersive gameplay. You'll thank Relic for fixing some of the problems that irritated in the original, but is this worth another \$90?

Stand off

In hindsight, it's clear that Homeworld - a difficult game to get into at the best of



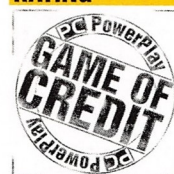
times - rode to success largely on the back of its innovative gameplay. Battles in true 3D space had not previously been done well, and many gamers could have fun simply playing around with the game, as opposed to actually playing it.

With Homeworld 2 though, it's all been done before. Everything in the game is familiar, nothing surprises. If you're a Homeworld fan, the innovations in the new game will all be things you've already thought of. In short, the cool factor is disappointingly low.

Naturally, it follows that Homeworld 2 is also more of a good thing. It's tailored to the fans. But we'll be interested to see how many new players it manages to bring on board.

Anthony Fordham

RATING



FOR

Welcome tweaks
Awesome style
Tight strategy

AGAINST

Same old, same old
Confusing navigation
Repetitive

OVERALL

More a graphical
upgrade pack than a
true sequel

70



SpyHunter

Better than being hit in the head with a rusty shovel. Maybe.

Developer: Aspyr ■ Publisher: Mudway ■ Distributor: PICA ■ Price: \$49.95 ■ Rating: M ■ Available: Now

SYSTEM

NEED

P3-667
128MB RAM
64MB videocard
500MB HDD

WANT

At least 3 PCs in the hope the game will run on one of them

MULTIPLAYER

Nope

ONLINE

www.spykids.com
The mysteriously popular Spy Kids movie franchise has a third installment, this time with that great 70s gimmick - 3D! It's fun! Funner than this game, anyway.

RATING



OVERALL

When it works, it's freaking awful

32

You're lucky I'm such a dedicated and hard working gaming journalist, because anyone else would have given up in disgust on SpyHunter on the second PC they tried to install it on and just taken the whole horrible mess back to the shop.

Most PC gamers are pretty savvy these days, and they know when they're buying a port and what to expect from it. For their \$50 they don't ask for a life-changing gaming experience. They just want a game that works.

SpyHunter is not a game that works. Most people's experience of the PC version of

this action racer will be a black screen with the words "autosave is enabled" scrawled on it in a barely legible font. That's all two of my three PCs would give me.

The game ran on the third PC - the low end PC that had had most of its good parts cannibalised for my two review machines - but by that stage, some four hours into the exercise, I needed SpyHunter to really hit me with some amazing gameplay to make the ordeal even remotely tolerable.

So here's the skinny - like on the PS2 version the player drives a high tech spy car to the sounds of a technoed-up version of the Peter Gunn theme, shooting at passing enemy spies on motorbikes and in other cars, dropping the occasional defensive oil slick, and jumping the car through large gaudy symbols on the track intended to represent GPS access points.

As the car takes damage, bits fly off and if enough damage is sustained, the car splits in half and turns into a faster but less powerfully armed motorbike. Hurtling around the track, the player will eventually spot a large van, the driving into of which will instantly restore the car and all its weaponry.

Not quite spytastic enough for you? Every now and then the track unexpectedly veers into a canal or lake and the car automatically transforms into a speedboat.

That's right, you heard right, a speedboat. The subsequent action is exactly the same as the on-road sections except the enemy now takes the form of other speedboats or the occasional suicidal frogman.

So what's the problem? Apart from the installation difficulties of course. Well, the problem is that this game is clearly and unmistakably a cash-in on a moderately successful PS2 game. And at \$20 it would probably be almost worth it. But, as the famous joke about the two hicks in the biplane goes, fifty bucks is fifty bucks.

For casual gamers who just want a quick blast, there are dozens of superior titles on the shelves. Bandits: Phoenix Rising is a car combat game that actually works, and most places now sell it for \$19.95.

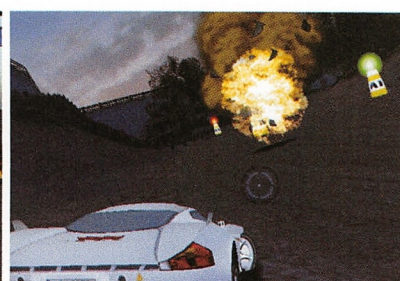
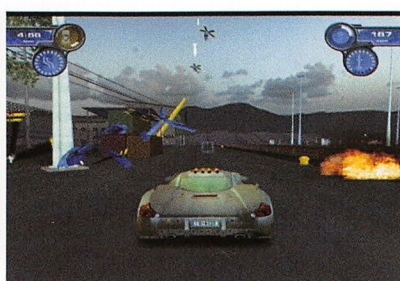
And for the dedicated gamer who must have a wide and varied collection, SpyHunter is just going to insult. The graphics are console-quality, the action is TV-speed, the controls are not particularly responsive and the game's central conceit - battle the evil forces of NOSTRA using a super high tech car and no backup - is moronic.

Yes, it has a proud arcade legacy, but unfortunately in the PC version, that legacy is let terribly down.

Anthony Fordham

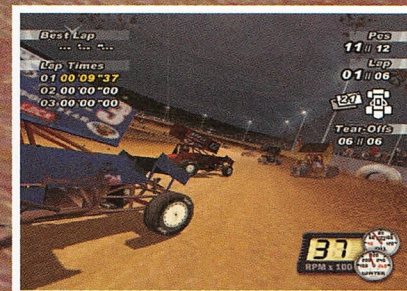
DROOLING IDIOTS

While the manual doesn't offer any advice on how to deal with compatibility problems, it does dedicate four full pages to Saliva, the 'hard rock quintet' that recorded the game's title music. It's awful, of course, but the lyrics are particularly entertaining: "You know I put it in drive / cause it makes me feel alive / the situation's awry and going faster / and now I'm hunting you down"; and then the chorus: "Come on and let the Hunt be the Hunted (repeat x4) / get in my way and / I'll be blowing up something." Almost worth the price of the game? Not even.



World of Outlaws Sprintcars

Get Your Dirt On!



Developer: Ratbag ■ Publisher: Infogrames ■ Distributor: Infogrames ■ Price: \$29.95 ■ Rating: G8+ ■ Available: Now

Aussie design group, Ratbag, is fast becoming famous for its highly vaunted mud-based driving simulations. World of Outlaws: Sprintcars represents its latest effort, and although there's no arguing the quality of the release, one has to wonder, how many games do we need that simulate driving around in muddy circles?

Unlike Ratbag's other dirt track racing titles, Sprintcars is officially licensed, thus the 'World of Outlaws' tag, and allows you the dubious honour of racing as a World of Outlaws official driver (although you race as yourself in career mode). The game also contains twelve real life Sprintcar tracks, but they're all essentially the same: big, round, covered in mud and located in some redneck hick-town in the good ol' US of A.

Just like its predecessor, Dirt Track Racing 2, Sprintcars boasts an impressive - and slightly more polished - career mode. Ratbag produces some of the only racing games that really allow the player into the management side of motor-sports. For example, Sprintcars' career mode allows you to gain official sponsorships that pay for your cars, upgrades, repairs and event costs. Race well and get big sponsorship dollars, race poorly and you'll be struggling to maintain your ride. The management side of Sprintcars is a very impressive addition that adds a much-needed new dimension to what would otherwise be a rather monotonous exercise in driving in anticlockwise circles.

But driving in constant anticlockwise circles may not be as boring as it sounds... depending on who you are and your cup of tea. It's certainly not boring when you're behind the wheel of a lightweight, eight hundred horsepower rocket, bumper-to-bumper at close to three hundred kilometres per hour - sideways. And if you happen to be a fat-gutted, beer-swilling truck driver from the Mississippi then watching these rockets go around in circles is probably more



SPRINTCARS VS DTR2

Racing in World of Outlaws: Sprintcars is a very similar experience to racing Ratbag's Dirt Track Racing 2 (which, in turn is rather similar to Dirt Track Racing 1). The physics are the same as DTR2, leaning much more towards a true 'simulation' than an arcade racer, but - mainly due to the simple tracks - it's not hard to master. There are, however, a few differences. For example, unlike DTR2, mash the gas pedal in one of these over-powered go-karts and you'll be doing wheelies down the back straight! That's very cool, but ultimately these differences really aren't very notable. Sprintcars sometimes feels more like an extra car-category left out of DTR2 than a whole new game in itself.

appealing then seeing Angelina Jolie jelly-wrestle with Denise Richards after a wet T-shirt competi... erm... anyway... where was I? The point being made is that Dirt Track Racing is a motorsport that concentrates on racing against the other drivers, as opposed to mastering the actual track, and the game recreates this challenge extremely well. For this reason it could be seen as somewhat unfair to criticise a dirt track simulation for having oval tracks - especially considering



they're cyber-replicas of official real life venues. Nonetheless, it must be said that the ovals will get repetitive to anyone who isn't really a fan of the sport to begin with.

Graphically, World of Outlaws is good, but not quite at the standard as other games such as Geoff Crammond's Grand Prix 4. The up side of this is a silky-smooth framerate, which comes at the expense of glitzy eye-candy. World of Outlaws: Sprintcars gets the 'must have' stamp only if you're a hardcore Sprintcar racing fan to begin with. Overall, it's a very decent racing game, but really doesn't offer anything new from its predecessor, Dirt Track Racing 2. If you haven't got either, I'd have to recommend DTR2 over Sprintcars simply due to the greater variety it offers in terms of cars and tracks.

Victor Webster

SYSTEM

NEED

800MHz CPU
128MB RAM
1.6GB HDD
8MB 3D videocard

WANT

1.3 GHz+
256MB RAM
32MB GeForce

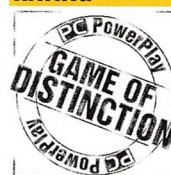
MULTIPLAYER

Yes

ONLINE

sprintcarworld.com
Frequented by aforementioned fat-gutted, beer-swilling truck drivers from Mississippi who would rather watch Sprintcars that Angelina Jolie and... forget it.

RATING



OVERALL

Far too similar to its predecessors to be worthy of exalted commendation.

76

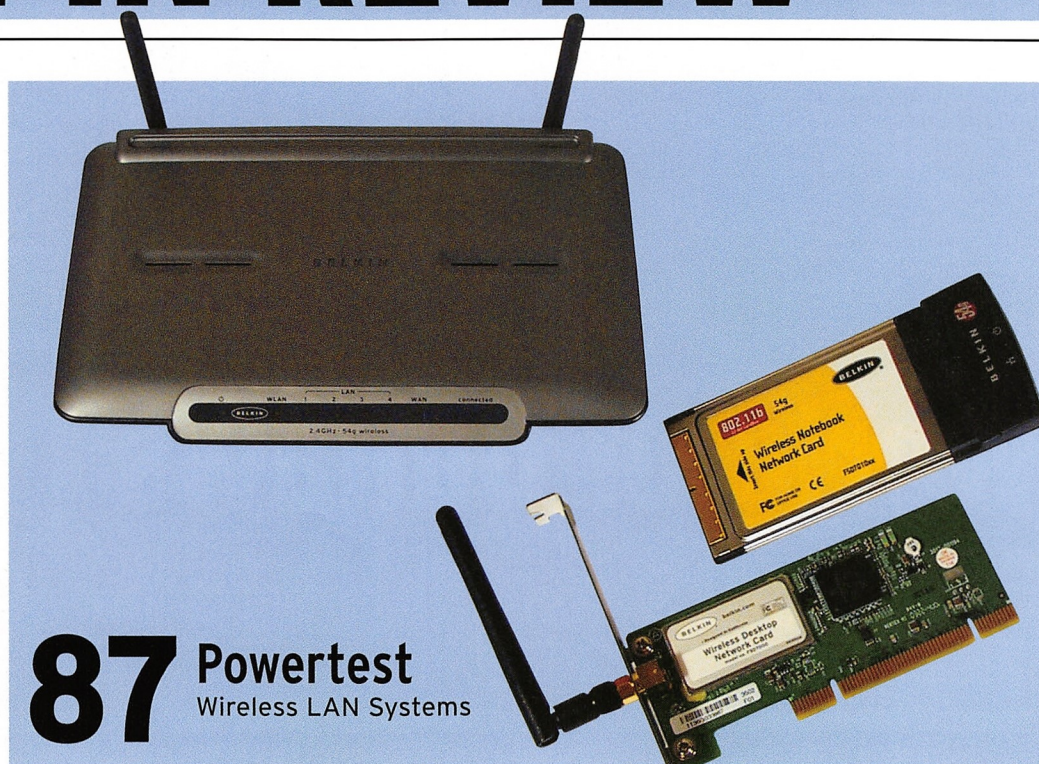
TECH IN REVIEW

A hhh, marketing speak – it holds the same place in my heart as masturbating with a cheese grater, getting stuck in an elevator just after someone has unloaded a cheesy grunt, and drinking three day old egg yolks. Yeah, you could say I'm not a big fan of the bollocks these insidious folk try to get us to believe so that we'll more readily part with our hard earned moolah.

Take a look at our PowerTest and you'll see why. While the marketers in charge of the packaging of these kits are more than happy to slap "Super Fast (up to) 54Mbps" all over the box, in reality these claims are over six times the speed of what our real world tests showed. Even the fastest of the wireless networking kits that we tested struggled to hit 8Mbps, and from there it was all downhill. Thankfully, you can now see just how fast these kits are in the real world, so you'll be able to cut through this promotional prattle like a light saber through a Wampa's arm.

This month we also took a look at four of the big brands of DDR500 memory – which of course hasn't even been ratified by JEDEC, the big guys in charge of memory specifications. So before you take the plunge and fork out for some of this uber expensive memory, make sure it's been tested on your motherboard, otherwise you'll have a rather pricey new paperweight.

We hope you enjoyed our Home Theatre tutorial, and if it's sparked your interest, we've got a few reviews that carry on with this topic. There are a couple of mini PCs duking it out to see which one deserves to be the basis for your media box, as well as Acer's spiffy



87 Powertest Wireless LAN Systems

new entertainment PC. Then there are the totally cool gadgets such as the TrackIR head tracking unit and the Zalman Surround Sound headphones. Well, one of them is cool, while the other is a nice idea done bad.

Unlike game releases, you could say this month has been pretty chockers when it comes to interesting hardware. Now if only we had some cool new games to play on it...

Bennett Ring
Deputy Editor,
bennetr@next.com.au

- 94 DDR500 Memory Shootout
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- 102 Headphones
- Home Theatre Case
- 103 5.1 Speaker Shootout

HOW WE TESTED

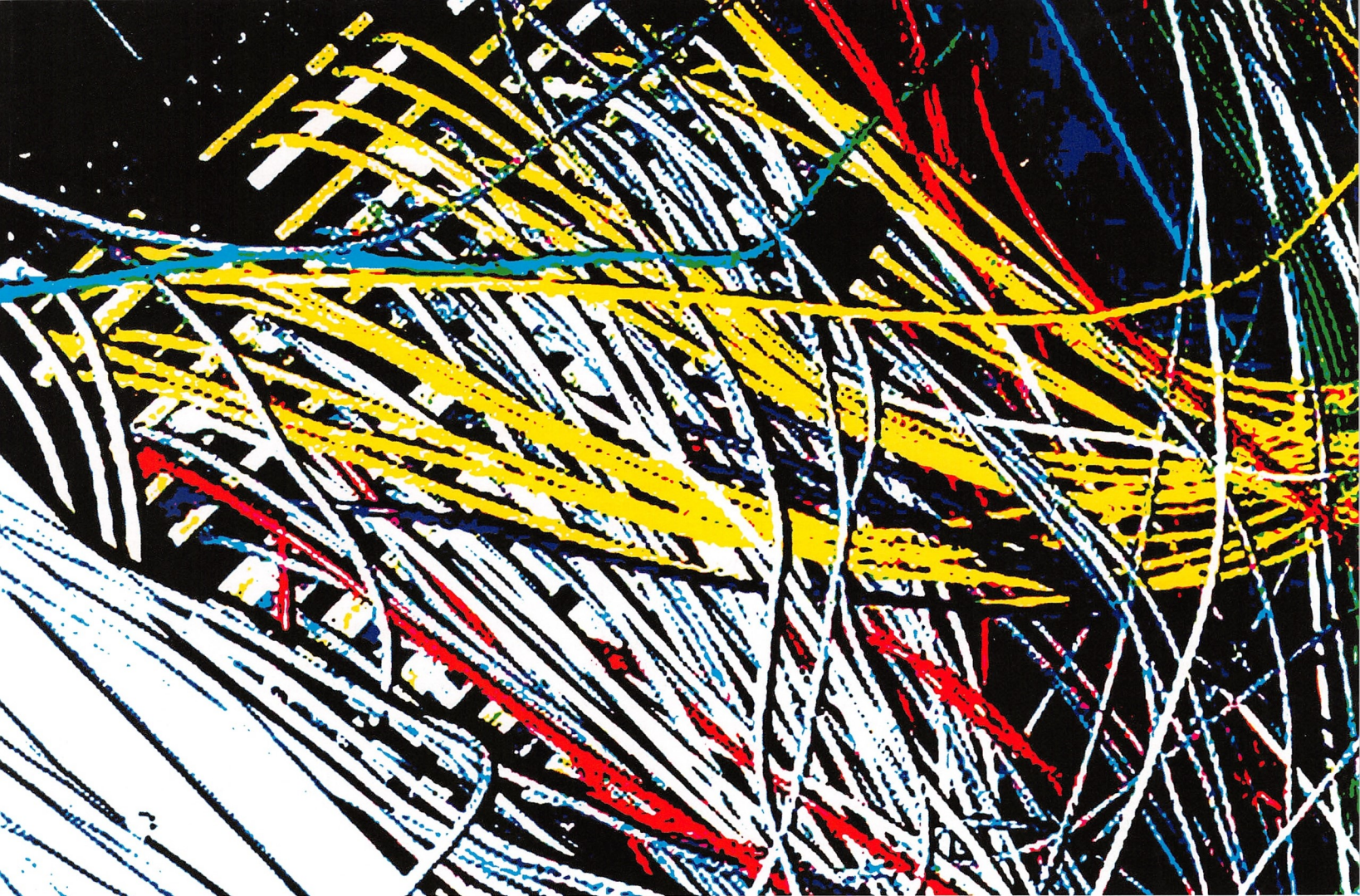
For an in-depth explanation of how we test video cards, CPUs, and motherboards head to our PowerTools section on page 104. You'll also see a list of hardware that makes up the PCPP testbenches, which are used for the testing of the majority of our hardware.

Where possible we use benchmarks based on real world games to test hardware performance; this way we know for sure which component will give you the best gaming experience. We don't love hardware for hardware's sake – it's all about using this hardware to make your

entertainment even more, well, entertaining. We also try to compare the review product with the current "best of class" piece of hardware, so at the end of the day you'll know exactly which product offers you the best bang for buck.

For a product to earn a Power Award, price be damned, we're just looking at how this product performs. If there's nothing better, that we've seen at least, it'll get the Power Award. However, if a product offers a great level of performance or features for a very reasonable price, it'll get the Value Award. Simple, really.





Who needs cables when there's radio waves that might one day cause cancer? **Bennett Ring** doesn't, that's for sure



THE MAGIC DISAPPEARING CABLE TRICK

The latest technology to get consumers horny for tech, and thus hopefully part with their cash, is wireless networking. The more astute readers of PC PowerPlay will probably know that this is simply a network that doesn't use those ubiquitous blue cables to link PCs to each other, instead using radio waves to transmit data. Unfortunately it's a rather confusing area of IT components at the moment, thanks to some very complicated definitions for the various standards of wireless networking available.

Also, until recently wireless networking was expensive. Very expensive. This is why many people thought twice about making the switch to a wireless LAN; why bother spending upwards of \$500 just so you've got less chance of tripping over cables and breaking your neck? However, thanks to the powerful force feared by commies around the globe, our friend capitalism, competition in the

market has driven prices steadily downwards, to the point where it's now relatively cheap. And many users are now finding that wireless networks actually have a greater benefit than simple aesthetic values. It's all about mobility baby, mobility.

We asked D-Link what the difference in sales has been between PCI (for desktop PCs) and PCMCIA (for laptops and notebooks) wireless networking adaptors. As we expected, PCMCIA adaptors are outselling their PCI brethren by a huge amount, at around four to one, which makes sense. Desktop users generally don't haul their fragile towers out to the lounge room to do a bit of Net surfing while watching the tube, but mobile owners are much more likely to use their PC all over the house. This is where the beauty of a wireless LAN shows its true merits. Instead of having to use your laptop where there is a fixed cable, a wireless LAN allows you to use your laptop pretty much

anywhere in the house. In some cases, with kits that have extreme ranges, you can even use your kit out in the garden, garage or pool. Okay, maybe the pool isn't such a great idea.

The bits

A wireless network is comprised of two main components; an access point (which is often built into a router or broadband modem), and wireless network adaptors, which replace the standard cabled network card found in your PC. The access point basically acts as a little radio transmitter, beaming data to anything within a certain radius, while the network adaptors suck up this data, as well as transmitting data back to the access point. When an access point is used, it's known as Infrastructure mode, but certain wireless network adaptors can also chat to each other directly without the need for an access point. This is known as Ad-Hoc mode, but not all adaptors support this, and

getting two adaptors made by different manufacturers to operate in this mode is a hit and miss affair.

Made up Standards

The wireless networks that we're focusing on are both part of the 802.11 family of specifications; 802.11b and 802.11g, which were created by the IEEE (Institute of Electrical and Electronics Engineers). There's also plain old 802.11, the first in the family, and 802.11a, but both of these standards aren't generally used as much in the SOHO market. However, you might find a use for an 802.11a standard network - more about that later.

The main difference between the b and g standards is network bandwidth, otherwise known as 'how quickly can I spew data between several PCs before the network has an aneurysm'. An 802.11b network can throw data around at 11mbps, which is roughly one megabyte per second, while 802.11g ups the ante by

increasing the network bandwidth to 54Mbps, which is roughly four megabytes per second. This isn't set in stone though, as some manufacturers have managed to squeeze 54Mbps out of 802.11b kits. Well, that's the maximum theoretical speed. Real world speeds proved to be an entirely different matter. Even the fastest of the kits only measured up at around 8Mbps in our tests, which is a sixth of the quoted speed! Now, we're used to seeing over the top marketing claims, but this seriously takes the cow shit cake.

The network savvy readers will soon realise that even 802.11g doesn't come close to a traditional 100BASE-T network, which coughs up the data at approximately 100Mbps, so those of you who are heavily into copying files across your network will find wireless networking simply isn't fast enough for your needs. For simple gaming and net surfing needs though, it's more than adequate, and there is no increase in latency over cable.

There is a problem with both 802.11b and 802.11g - the radio frequency used. These standards use the 2.4GHz frequency, which is freely available, and is thus prone to clutter from other devices such as fax machines and cordless telephones. Also, while there are 13 different channels that each standard can use in the 2.4GHz band, in reality only 1, 6 and 13 are useable. So if your apartment is surrounded by three other wireless networks, each using

one of these channels, you'll probably find that there is a load of interference when you try to set up your network. Which is where an 802.11a network might come in handy; due to the scarcity of these networks you'll probably be able to use the 802.11a kit in these cluttered circumstances, as 802.11a uses the 5GHz frequency and has more channels. By the way, 802.11g is backwards compatible with 802.11b. Also, 802.11g has only recently been officially ratified by the IEEE, so many of the 802.11g kits around are 'draft' versions of the standard, meaning they might not be 100% compliant with 802.11g.

Most wireless networks have an indoor range of around 30 metres, but this varies greatly between networking kits. Outdoor range is usually greater, as generally there are less obstacles between the access point and the network adaptors. We told you it was confusing, didn't we?

Testing time

We sourced eight different 802.11b and g kits, and gave them a thorough thrashing to see which one deserved the PCPP thumbs up. Being total networking newbies, we called upon the services of Simply Wireless to show us how to set up and test each network. Surprisingly enough, setting up most of the kits was a very simple process, which is usually explained clearly in the included installation manual. Some of the kits were simply access points, while others were

routers, and there were even a couple of wireless cable/DSL modem routers thrown in for fun.

For each kit tested, we received a PCI wireless adaptor, a PCMCIA wireless adaptor, and an access point/router/broadband modem. The PCI card was installed into a desktop machine with a fresh copy of Windows XP (with service pack 1, which adds wireless networking functionality to WinXP), while the PCMCIA network adaptor was installed into a laptop, which also had a clean copy of Windows XP. Both network cards were assigned a static IP, before firing up the access point and running the network in Infrastructure mode. All installation of drivers and hardware was done according to the manual, with no additional tweaking. Due to a couple of local wireless networks in the neighbourhood, channel 1 was used for testing. A 31MB zip file, comprised of zipped textures from UT2K3, was then transferred from the desktop machine to the laptop at two ranges; right next to each other, and then with the laptop at a range of approximately 15 metres, with a nice big concrete wall in the way to make the kits sweat a little. The time taken for both file transfers was recorded, and from this we calculated the real world bandwidth of each kit.

Ping times were also tested, and all managed to come in at under 2ms, making these perfect for gaming, where high bandwidth isn't necessary.

We also checked out how easy it was to set up each kit, as well as how intuitive the interface of the access point was. Finally, came the security tests - which is something most prospective owners should be concerned about. On Simply Wireless' advice, we focused on three areas:

1.) WEP encryption - this encrypts the packets being sent around the network, so that someone from the outside can't read them. Was WEP easy to enable on the kit, and was it easy to do so?

2.) MAC address filtering - each network adaptor, wireless or otherwise, has a unique MAC address that no other product in the world has. Many wireless networks allow you to specify which MAC addresses are allowed to access your network, thus locking out intruders. Did the kit allow this, and was it easy to enable?

3.) Disable SSID (Service Set Identifier) broadcast - this stops the name of your network being broadcast, making it more difficult for novice hackers to get in. Did the kit support the disabling of SSID broadcasting, and if so, was it easy to implement?

Finally, we took into consideration the cost of each unit and compared this to the kits functionality.

Now that you've got a better idea of what a wireless network is comprised of, the two main standards in use, and the things we looked for in each kit, it's time to see how each kit measures up against the rest.

Belkin

• Distributor: Belkin • URL: www.belkin.com.au

The Belkin bundle is a prime example of how strange the standards for wireless networking are. It's packaged as an 802.11b kit, yet is supposedly capable of 802.11g speeds, at a theoretical maximum throughput of 54Mbps. Our bandwidth test proves that, like all of the kits in the PowerTest, these theoretical bandwidth figures are far from the truth. At close range, the kit took 33 seconds to transfer a 31MB file! And it was still the fastest of the lot! At the longer range, the speed slowed down even further, taking 55 seconds, again nowhere near the advertised speed, and yet these speeds were still faster than the kits tested.

Setting up the kit was very easy, proceeding smoother than a baby's bottom that's just been run over a power sander. The HTML interface for the router was very intuitive, although the help files could have been better placed. As the name suggests, this isn't just an access

point, also acting as a cable or DSL modem, as well as gateway and router features. Comprehensive firewall options were also included, along with a parental lock option to keep the kiddies away from the nude net sites. This kit had all three security features that we were looking for, and all were quite easy to set up with the exception of WEP, as the WEP pass phrase is printed in a series of boxes making it hard to do a simple copy and paste.

As the fastest kit in the roundup, and being remarkably easy to set up, we can't help but recommend this product. Heck, it's even great value!

PRICE

- 54g Wireless Cable/DSL Gateway Router: \$299.95
- 802.11b 54Mbps PCI Wireless Desktop Network Card: \$99.95
- 802.11b 54Mbps PCMCIA Wireless Laptop Network Card: \$99.95
- Total: **\$499.85**

PCPP Score

Install Ease: 4/5 Overall: 4.5/5



Billion 743GE ADSL Modem VPN Firewall Router

• Distributor: PC Range • URL: www.pcrange.biz

If you find yourself existing solely on a diet of two minute noodles and living in a canvas tent, the Billion kit is probably the only kit you'll be able to afford. At only \$369 with two network adaptors, there's no denying that this bundle is an absolute steal.

Setting up the kit was surprisingly easy considering the low price – it wasn't quite as easy on the brain cells as some of the more expensive kits, but it wasn't far off. Probably the biggest issue we had was with enabling WEP – it's hard to tell which key to use between the adaptors and the access point, as they are numbered differently. However, after a couple of minutes we had it up and running, with most security features enabled. Disabling SSID is possible on the access point, but the cards that PC Range bundle with this kit currently don't support this, so you'll have to make do with WEP

and address filtering to keep things nice and secure.

We weren't expecting great things out of the performance, taking into account its low price and the fact that it uses the 802.11b standard, but were pleasantly surprised by its results. Sure, it wasn't anywhere near the fastest of the bunch, but it's more than adequate for sharing a Net connection or playing games. Highly recommended for those on a budget who are looking to replace their shoddy ISP-provided DSL modem, and want solid firewall protection, as well.

PRICE

- Minitar MNW2B PCI 802.11b network adaptor and Minitar MNW2B PCM 802.11b network adaptor: \$369 for bundle
- **Total: \$369**

PCPP Score

Install Ease: 4/5 Overall: 4.5/5



Linksys

• Distributor: BlueChip IT • URL: www.bluechipit.com.au

This Linksys kit is one of the 'draft' 802.11g kits, meaning that it isn't truly an 802.11g kit. However, there should be a firmware upgrade available that updates this to a true 802.11g kit. Installation was a total walk in the park, working perfectly straight out of the box with no need for fiddly manual driver installs, tweaking of settings or slaying of sacrificial goats.

All of the necessary security features were present and easy to set up via the HTML interface of the access point. Unlike many of the other kits, this is just a simple access point.

Unfortunately, the speeds for this kit were quite disappointing. It took 88 seconds to transfer the 31MB file at close range, and this blew out to a whopping 339 seconds at long range. While the close range speeds weren't too shabby, the long range speeds were by far the worst of all of the

kits in the PowerTest, not a nice place to be.

This kit was one of the easiest to setup, but this doesn't help the fact that it had mediocre close range and woeful long range performance, and it's incredibly expensive when compared to the rest."

PRICE

- WAP54G Wireless-G Access Point: \$331
- Wireless-G Notebook Adaptor: \$172
- Wireless-G PCI Adaptor: \$263
- **Total: \$766.00**

PCPP Score

Install Ease: 5/5 Overall: 3/5



D-Link AirPlusXtremeG range

• Distributor: D-Link • Url: www.dlink.com.au

T It appears that D-Link is one of the companies who are lagging behind when it comes to dropping prices. For example, check out the price of a simple access point - \$350! And that doesn't include any broadband modem or router functionality, which makes it hard to recommend right off the bat. Thankfully, it's one of the only 'true' 802.11g kits of all of the kits in the PowerTest, but this didn't seem to help its bandwidth.

Setting up this kit was a bit of a nightmare. After two visits from engineers from D-Link, three different PCMCIA cards, and a total reinstall of WinXP, we still could not get the PCMCIA card to work in our laptop, yet it worked perfectly in the D-Link engineer's laptop. D-Link is looking in as to why the PCMCIA card refused to work in our laptop, but it was a surprise considering that every other kit worked without a problem.

When we did manage to get it to function on their laptop, we couldn't

fault the setup process - install drivers, whack in the cards and away you go. The HTML interface for the Access Point was one of the better interfaces of all of the kits within the roundup, and it had the three big security features.

File transfer speeds were good at 35 seconds up close and 74 seconds at range. This makes it the second fastest kit in the entire roundup.

If it weren't for the nightmare of trying to get this kit to work, and high price, we wouldn't think twice about recommending this kit. But after taking these two factors into account, we're sad to say that it doesn't get the PCPP blessing.

PRICE

- DWL-2000AP Access Point: \$349.95
- DWL-G650 Wireless PCMCIA Adaptor: \$169.95
- DWL-G520 Wireless PCI Adaptor: \$199.95
- **Total: \$719.85**

PCPP Score

Install Ease: 3/5 Overall: 2.5/5



D-Link

• Distributor: D-Link • Phone: www.dlink.com.au

Don't let the Broadband in the product name fool you; this product is not a broadband modem. Quite surprising considering its high price.

We used the same PCMCIA and PCI adaptors as with the DWL-2000AP, and of course had the same problem with trying to get the PCMCIA card to work in our laptop. But once the engineers paid our office a house call, setting up the DI-624 was incredibly easy. Simply log into the Router via Internet Explorer, and away you go. D-Link really should be commended for making its interfaces so clear and simple to use, even for the novice user. The inclusion of setup wizards make installation even easier - provided you can get the PCMCIA card to work in the first place!

Performance for this product was identical to the DWL-200-AP, at 35 seconds when the laptop was next to the router, and at 74

seconds at the longer range. Again, these speeds are very respectable, but still don't come close to the 54Mbps that is plastered all over the boxes.

Unfortunately it's still let down by the high price, being very expensive for what it does. As a result we'd only recommend this product to gamers who already have a broadband modem, and who don't mind paying a high price for a simple to configure device.

PRICE

- DI-624 Wireless Broadband Router: \$379.95

PCPP Score

Install Ease: 4/5 Overall: 3/5



NetComm

• Distributor: NetComm • URL: www.netcomm.com.au

This NetComm kit is one of the few 802.11b kits in the entire roundup, but as its bandwidth results show, it isn't too far behind some of the 802.11g kits. The close range test took a total of 107 seconds to transfer the 31MB zip file, while the long range test took a slightly lengthier 118 seconds. Now you can see why we don't recommend wireless for anyone who does a lot of file transfers over their network - at two minutes for a 31MB file you can imagine just how long several gigabytes would take. By the time it'd be done we'd probably have wireless neural networks linking human minds and computers around the globe in place.

Installing this product wasn't quite as simple as most of the other kits, as the automatic driver install didn't work as well as the manual optimistically suggests. In fact, we had to do a manual driver install via WinXP's Device

Manager, a task that many novices mightn't have a clue about. The interface for the Access Point also wasn't as user friendly as many of the other kits, and we couldn't access the AP properties wirelessly, instead having to plug it into one of our PC's USB ports. All of the necessary security options were included, but due to the clunky interface were a little tricky to enable.

Its major redeeming feature is the price - it's damn cheap. And if you're only going to be using it for gaming, the lower bandwidth won't be a problem.

PRICE

- NP6800 Wireless LAN 802.11b Access Point: \$199
- NP7032 Wireless LAN PCMCIA 802.11b: \$99
- NP7042 Wireless LAN USB 802.11b: \$128
- Total: \$426.00

PCPP Score

Install Ease: 2.5/5 Overall: 3/5



Netgear

• Distributor: Netgear • Url: www.netgear.com.au

If you're after a wireless networking kit that is incredibly easy to set up, look no further. Even a carrot could set up this gear. It had by far the most intuitive, easy to use interface, and as a result installation took a matter of minutes. One of the nicest touches about the interface is the fact that all help files are displayed on screen, right next to the settings they apply to. So if you get stuck, you don't need to go digging through another online manual to find the answer to your woes. The other manufacturers should take note of this - and then shamelessly rip off the idea. It's a simple solution, but works wondrously.

Unfortunately, the transfer speeds of this kit weren't quite as impressive as the ease of installation. This is probably because the 802.11g PCI card was not yet available at the time of the review, so we had to make do with an 802.11b card. The close range

test took 81 seconds, while the long range test took 8 seconds longer, at 89 seconds. As you can see, this is around three times the speed of the fastest kit in the roundup. However, the imminent release of an 802.11g PCI adaptor should see this performance move into line with the faster 802.11g kits. Unfortunately, this kit is one of the more expensive bundles, even when taking into account that the AP is also a full cable/DSL modem with router, and when combined with its slower transmission speeds makes it hard to recommend.

PRICE

- WGR614 Cable/DSL 54Mbps Wireless Router: \$299
- WG511 54Mbps Wireless PCMCIA Card: \$159
- MA311 11Mbps Wireless PCI Card: \$179
- Total: \$637.00

PCPP Score

Install Ease: 5/5 Overall: 3.5/5



Netgear

• **Distributor:** Netgear • **URL:** www.netgear.com.au

This product is basically identical to the 54Mbps WGR614 Cable/DSL Wireless Router, with the exception that it's only capable of 11Mbps thanks to its 802.11b support. So it's just as easy to set up - you'd have to try really hard to screw the pooch on the installation of either of these kits.

Like its 54Mbps brother, the interface is incredibly intuitive, with the handy help files displayed alongside each setting. As a result of it using the older 802.11b protocol, and thus older hardware, the MR814 is slightly cheaper, but it's definitely a slower product. We used the same wireless adaptors as for the 54Mbps version for our testing, and our close range test measured in at 204 seconds, the second slowest of all of the kits, while the long range took slightly longer at 219 seconds, which was also the second slowest result for the long range test.

None of these kits are going to give you a lightning fast network, so if you're just going to be using your wireless network for gaming, then you might as well settle for an 802.11b kit and save yourself some cash. And for this purpose, the Netgear MR814 comes to you highly recommended, all thanks to its very competitive price and easy to use interface.

PRICE

• MR814 Cable/DSL 802.11b Wireless Router: \$229

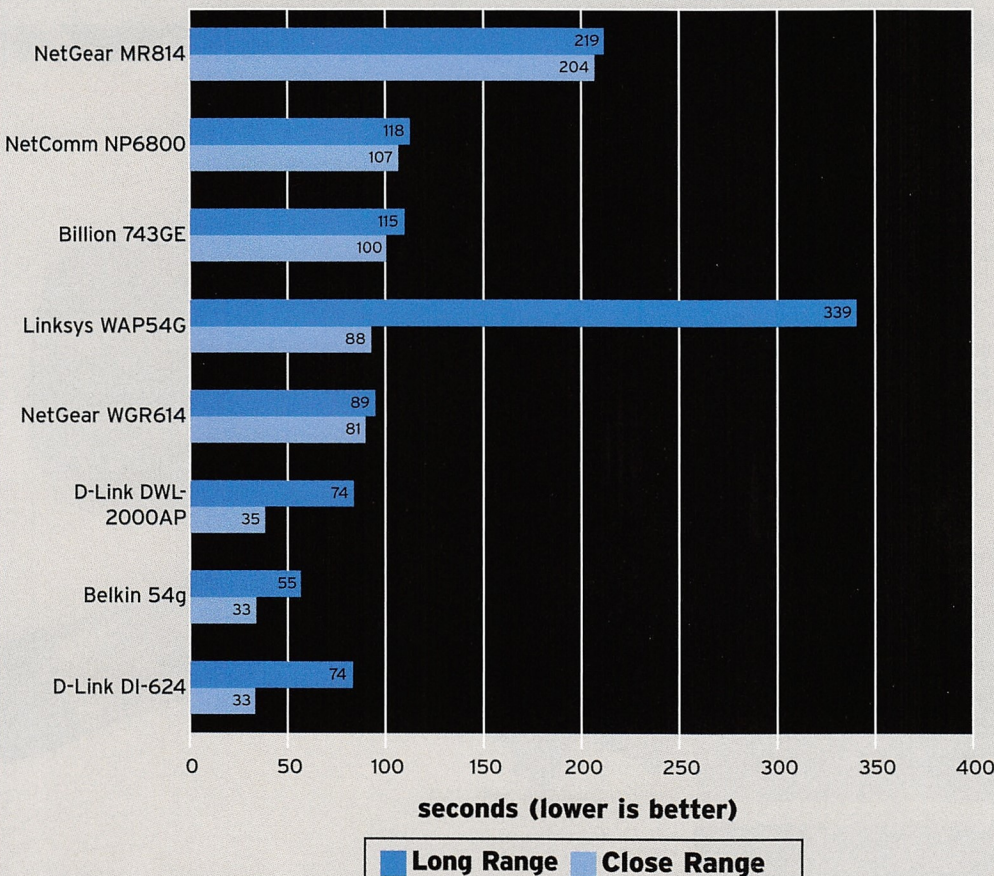
PCPP Score

Install Ease: 5/5 Overall: 4/5



File Transfer test (31MB zip file)

File Options View Help



simplywireless[®]

WITH THANKS

Massive thanks are owed to Simply Wireless, who were good enough to agree in helping us with this article. If you're interested in setting up your own wireless network, these lads have all the answers, not to mention a nice range of hardware that will suit your needs.

1300 888 166
simplywireless.com.au



SIMPLY THE BEST!

The chaps at Simply Wireless are not only good looking, smell of real soap and change their underwear at least twice a week, but they're also generous. Not content with having supplied us with valuable technical assistance for our Wireless Networking Powertest this month, they felt compelled to throw in a few extra goodies for our loyal readers.

You can be in the draw to win one of the two kick-arse prizes on offer. If you're lucky enough to win first prize, you get The Netgear 802.11G full wireless network bundle complete with one access point, two network cards and installation. Madre Mia! Rub the crust from your eyes, you read right, you get 2 x WG511, 1 x WGR614 and installation

all worth a pretty cool \$889. For second prize, we have an Enterasys-Cabletron PCACIA card and a Hotspot voucher to the collective value of \$295, which is worth more than our pissed asses on a Friday night, to give away to five readers, who probably won't touch our pissed asses on a Friday night, anyway. Yep, five readers will soon

be able to work from their laptops at a wireless hotspot. Choice! So, get that envelope - or if you're dead keen to get rid of those cables, maybe you can post 213 entries - and answer the question below. For more information about wireless networking check out www.simplywireless or call 1300 888 166.

Q. Which consortium was responsible for developing the 802.11 specification for Wireless Networking?

And send it to:

**Simply Wireless Comp
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Redfern
NSW 2016**

simplywireless[®]

FOUR-WAY DDR500 MEMORY SHOOTOUT

A While most modern motherboards allow you to simply lock your PCI/AGP bus speeds at 33 and 66MHz respectively, this is not the case with the memory bus as, without proper motherboard dividers, it is still riding directly off the FSB. Therefore, as the FSB is increased, the memory frequency in turn increases

as well. Although for smaller overlocks this isn't an issue due to the fact that any performance increases are always welcome, for larger overlocks it is not uncommon for the memory module/s to hit the wall long before the CPU does. And this is precisely the reason why memory manufacturers such as

Corsair, OCZ, GeiL, etc are still in business - many are willing to pay a premium for the extra overclocking that the high-end modules provide.

So we've established that, for overclockers at least, premium memory modules are indeed beneficial. However, which of these premium modules are going to

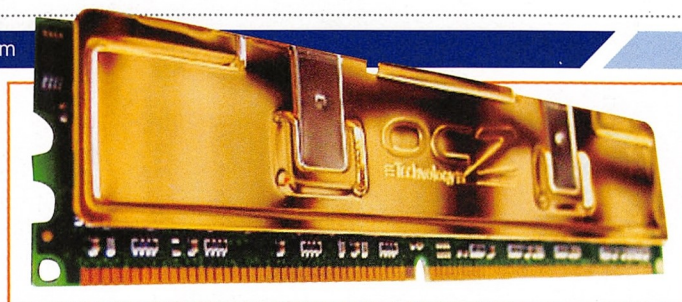
provide the best bang for your buck? That's what we're here to find out. We managed to source four different enthusiast-directed DDR500 modules from Corsair, OCZ, GeiL and Kingston (2x512MB for each type), with the ultimate aim of determining which can run at the highest speeds with the lowest possible memory timings.

OCZ Dual Chanel DDR500 Gold

• Price: \$850 • Distributor: Yen Industries • URL: www.yenindustries.com

T At 500MHz, the OCZ module was able to run at timings of 2.5/4/3/8 (CAS latency/RAS-to-CAS delay/RAS precharge/Precharge delay), while the maximum speed we were able to obtain with conservative timings of 3/4/4/8 was 530MHz. This is on par with the

Corsair and GeiL modules, however, at a price of \$850, you will certainly be better off checking out one of the other brands. Furthermore, despite what has been advertised, on our test bench at least, the premium "Gold" branding does not result in increased overclocking headroom.



Kingston HyperX DDR500

• Price: \$898 • Distributor: Synnex • URL: www.synnex.com.au

T Providing some much needed differentiation in our results, as we expected, the Kingston kit wasn't quite able to keep up with the other enthusiast offerings, maxing out at timings of 3/4/4/8 at 500MHz and only overclocking to 510MHz. Although comparatively it performed

fairly poorly, 510MHz is certainly nothing to sneeze at, especially since the DDR500 standard has not yet been ratified by JEDEC. That said, due to the results of the other three modules, it is difficult for us to recommend the Kingston module over the Corsair, OCZ and GeiL offerings.



GeiL DDR500

• Price: \$682 • Distributor: AusPCMarket • URL: www.auspcmarket.com.au

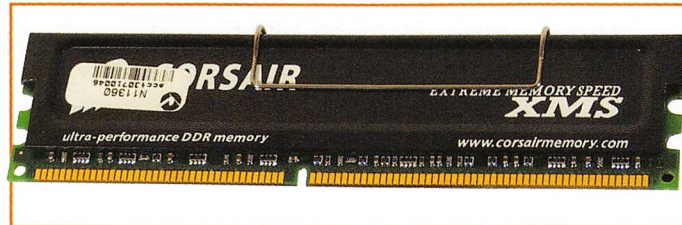
T The results for GeiL's offering were literally identical to that of the OCZ and Corsair modules. However, at a bargain price of \$682, it is clearly the winner of this roundup if you are able to get hold of a set before they're all gone.



Corsair XMS4000

• Price: \$750 • Distributor: Altech • URL: www.altech.com.au

T Corsair is known for producing high quality enthusiast memory modules, so its XMS4000 results were fairly unsurprising. That said, while XMS4000 modules are still quite inexpensive when compared with the Kingston and OCZ modules, the ultra-low price of GeiL's offerings puts



So due to the virtually identical nature of the Corsair, GeiL and OCZ modules, it is fair to say that either all three are based around exactly the same memory chips, or one or more of the other components used in our test bed maxed out before the memory modules did. However, upon further investigation of each manufacturer's

website, we're inclined to believe the latter. What does this reveal, exactly? Well, no matter which of the three modules you choose, neither of them will be a bottleneck in your overclocking attempts. While it is clear that if you're even considering purchasing either of these memory modules, you're obviously willing to

pay a premium, price is still an important factor. At the time of writing this review, the RRP for two 512MB Kingston DDR500 memory modules is around \$898, while the OCZ comes in at \$850, and the GeiL comes and Corsair modules are priced at \$682 and \$750 respectively. Judging by these prices, it is clear that

the GeiL modules are the most logical purchase of the four. Not only are they over almost \$70 cheaper than the second-lowest priced kit reviewed, but they also offer excellent performance. Thus, while the Corsair and OCZ modules both perform on par with GeiL's offering, the price of the GeiL module puts it well ahead of the pack.

RESULTS

SiSoft Sandra Memory Benchmark - DDR500 - Int Buff/Float Buff

OCZ @ 2.5/4/3/8: **5561/5536**
Kingston @ 3/4/4/8: **5470/5462**
Corsair @ 2.5/4/3/8: **5491/5534**
GeiL @ 2.5/4/3/8: **5603/5542**

Results - Maximum Speeds - 3/4/4/8

OCZ: **530MHz**
Kingston: **510MHz**
Corsair: **530MHz**
GeiL: **530MHz**



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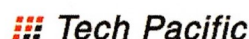
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PCPP 092



Pioneer DVR-A06Pro DVD \pm R/RW Writer

• Price: \$599 • Distributor: Pioneer • URL: www.pioneeraus.com.au

The \pm R/RW format DVR-A05 is a very stable and, therefore, popular drive, and the new dual-format DVR-A06 exploits this hard-won reputation with faster 4x dash and plus write speeds. With a terrific software bundle this is home movies in-a-box, with fries, to go. You get the high quality MPEG encoder TMPGEnc Plus 2.5 Lite from Pegasys which has been optimised for the latest Intel and AMD processors: this means that movie making is not a weekend or overnight affair anymore if you have a half decent Pentium 4 or Athlon XP processor. Simple installation, trouble free operation and the ability to 'do-it-all' had me sold on this drive. The unit is very quiet and has a smooth feel to its operation. It interfaces as an IDE UDMA33 device and can busmaster, meaning it won't hog the CPU when it's doing something as simple as playing a CD. Pioneer have never been hot on supporting a wide range of media

but their laser unit incorporates an improved write strategy control circuit that contributes to stable performance at high speed recording. They also employ a Liquid Crystal Tilt Mechanism that provides accurate and reliable operation with discs that have uneven curvature or thickness. The

SPECIFICATIONS

- Supports DVD-R/RW (4x/2x)
- DVD+R/RW (4x/2.4x)
- CD-R/RW (16x/10x) write formats and read formats DVD-ROM (single layer) 12x (16.62MB/s)
- DVD-ROM (dual) 8x (11.08MB/s)
- DVD-R/RW 6x (8.31MB/s)
- DVD+R/+RW 6x (8.31MB/s)
- CD-ROM and CD-R/RW 32x (4.8MB/s)
- CD-DA (digital audio extraction) 32x (4.8MB/s) and Video-CD 4x (0.6MB/s)
- Also supports CD-Plus, PhotoCD and CD-Text
- 2MB Data Buffer

PCPP Score

Just got a digital movie camera? Then buy this drive and get home movies to go!

90



drive uses RPC2 region control, allowing you to change the drive's region five times in total. It got a perfect score in the Nero CD Speed Advanced DAE test with the average rip a shade under 24x and it can read and write CD Text. It can write 4.38GB of data in under 15 minutes on \pm R, takes about 28 1/2 minutes on -RW and a tick under 24 minutes on +RW. You'll also find this drive as the OEM DVR-106. The street price of around

\$450 for the OEM will not include a software bundle and will not suit someone who wants to make a movie that night unless they already own a suitable DV application. For comparison, the DVR-A06 doesn't have the 24/16x CD-R/RW speed of the Sony DRU but the Sony doesn't have a great software bundle. What's wrong with it? CD-R/W should be faster but, otherwise, nothing!

Stuart Calvin



Western Digital WD360GD WD Raptor

• Price: \$275 • Distributor: Western Digital • URL: www.wdc.com

What we gamers need is a hard drive with platters spinning at or near the speed of light and can cut data like a plasma sabre, or something like that. If we can put good disk performance to bed we can really worry about things like saving for the next Godzilla vid-card from NRADIA. If I could afford a small family of 15,000 rpm Seagate SCSI Cheetahs, I'd have Ma, Pa and at least four little ones giving me the half-Terabyte of space I crave. The next best thing though, especially in terms of price, is a Western Digital Raptor. Western Digital don't produce SCSI drives any longer and a SCSI drive is beyond the reach of mere gamers - but this is a terrific alternative. It's 36GB single platter (33.53GB formatted), provides high data density for fast access and if you boot off an ATA100/133 IDE drive and pair a couple of these man-eaters on Serial ATA RAID0, you can spill blood and it won't be yours. The Raptors spin at an egg-

frying 10,000 RPM, providing fast response and low latency without the traditional SCSI controller and disk cost. In WinBench 99 v-2.0 (NTFS) the Linear Read Graph results were astounding: beginning at 117,000 bytes/s it did not fall below 100,000 bytes/s across a 35 billion byte read. In comparison, my parallel Seagate Barracuda IV began its read at just over 40,000 bytes/s,

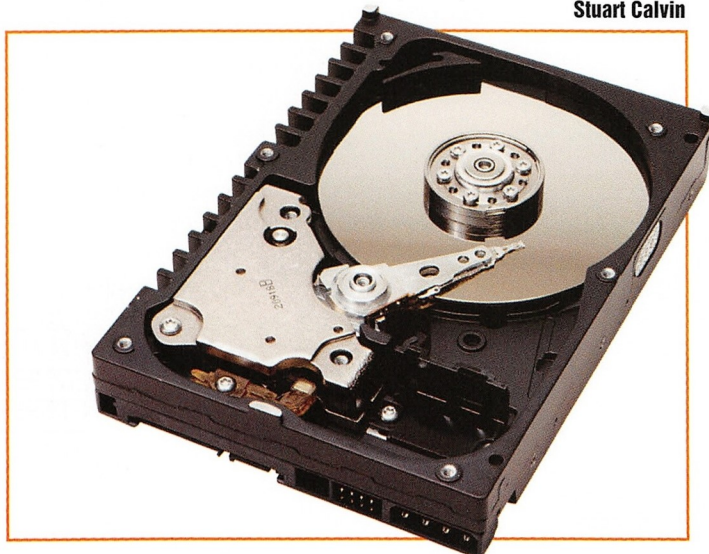
SPECIFICATIONS

- Single 10,000 RPM 36GB platter
- Seek time 5.2ms average
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- Five year warranty
- S-ATA and legacy Molex power connectors
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- Average Drive Ready time 7.0 second

while my USB2.0 Seagate (ATA100) began at 14,000 bytes. It has a sustained transfer rate of over 60GB/s but there is a CPU hit for this performance for which a SCSI controller would provide proper I/O relief. For the technical minded there is no command tag queuing support and the Marvel converter does a decent job compared to IDE controllers. Serial ATA is native to

the Pentium-4 ICH5 Controller Hubs courtesy of the 865 and 875 chipsets. It's also found as an effective integrated solution (Sil3112 controller) in contemporary Gigabyte motherboards with VIA chipsets. The VIA KT600 chipset also makes it native if not feral. Many of you are in effect getting the controller for free, so why not use it?

Stuart Calvin



PCPP Score

Gamers unite, buy a pair of these drives if relatively low disk space is not an issue.

90



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MINI-PC SHOOTOUT

With DIY home theatre computers increasing in popularity in recent years, the PCPP tech crew has been witness to an influx of pre-built mini barebones PCs from a wide variety of manufacturers, each hoping to cash in on the latest 'Killer App' for

the PC. When weighing up the fact that, in the case of most barebones PCs, one miniature cube-like device has the versatility to integrate a traditional audio CD player, DVD player, TV tuner, gaming platform and an Internet browser all into one neat,

aesthetically pleasing package - it's obvious where the appeal lies.

The two most recent units to hit our labs are the MSI Mega PC and the Pioneer Dream PC (which is essentially a rebadged iwill ZPC). While each of these units are quite

different in that they are both targeted at different price points, we have decided to put them head-to-head anyway because they are each essentially based around the same idea - bringing the PC out of the bedroom and into the lounge room.

The Dream PC

• Price: \$1999 • Distributor: Pioneer Computers Australia • URL: www.pioneercomputers.com.au

The Dream PC is the smallest of the two units, measuring just a tad larger than a CD-ROM drive - a godsend for space conscious users. Looking like a Mac in disguise, the Dream PC is aesthetically perfect for even the most pedantic decorator's lounge room, featuring a shiny chrome finish, with the unit itself being sandwiched between two clear acrylic plates. At the top of the Dream PC you'll notice a fan grill, which is used to vent hot air and prevent overheating - not an uncommon issue with mini barebones PCs.

As far as connectivity goes, the Dream PC certainly isn't lacking in this department, featuring two PS2 ports, four USB 2.0 ports, a serial port, a VGA port, a 10/100 LAN port (Realtek RTL8100B), two firewire (IEEE1394) ports, two rear audio jacks

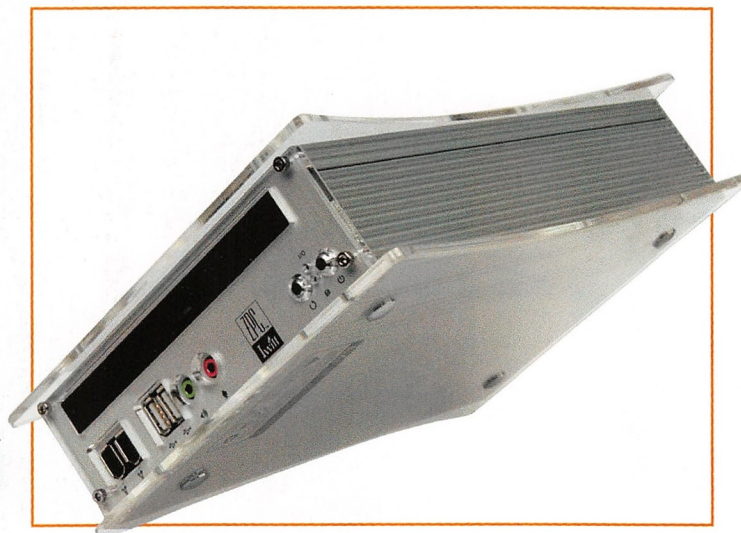
and finally, two front audio jacks (Realtek ALC650). As well as this, there is one internal bay for a 2.5" hard disk (traditionally used in notebooks), as well as a slim-type optical drive bay.

Moving inside, the motherboard adopted is based on the Intel 845GV chipset and, thus, features integrated Intel Extreme Graphics and supports both 533MHz and 400MHz FSB speeds. Due to the amazingly small size of the unit, there is only one memory slot on the board, supporting 1GB of DDR266/200 memory. Although the unit is traditionally a barebones PC, Pioneer Computers offers pre-built bundles, with this particular unit featuring a 2.4GHz Pentium 4 processor, 512MB RAM, a 40GB hard disk and a CD-RW/DVD combo drive. Furthermore, the Dream PC also comes bundled with a copy of Windows XP Home and at a price of

just \$1999, it is certainly well worth considering if you're simply planning on using it as a DVD/audio player or web browser. However, due to the fact that it utilises a fairly mediocre integrated graphics chipset and lacks

faster memory support, gamers should probably stay away from this unit, as 3DMark2001 SE scores were found to be in the sub-2000 range at default settings.

Asher Moses



PCPP Score

Great DVD/VCD playback performance, small footprint and a low price. However, gamers should probably steer clear.

80

MSI's Mega PC

• Price: \$699 • Distributor: MSI • URL: www.msi.com.tw

The Mega PC caters for all types of users, due to the sheer amount of features on offer. Firstly the unit features two PS/2 ports, serial ports, parallel ports, four USB 2.0 ports, two firewire ports, 6-channel audio and a 10/100 LAN port. As well as this, MSI have included a six-in-one memory card reader, supporting most of the well-known standards, as well as a 5.25" drive bay hidden neatly under a spring loaded cover panel. This is a unit that, to the untrained eye, looks no different to any other media playing device in your lounge room.

Possibly the most interesting aspect of the Mega PC is its ability to function as a regular CD player without the need to even power on the PC itself. Although you'll still need to boot into an operating system in order to watch DVDs and other video media, this is still a very convenient, time saving feature. In addition, track

information is displayed on an integrated LCD panel, featuring an attractive orange backlight, however, we were somewhat disappointed to find that the LCD is only compatible with the hi-fi/CD player component of the unit, and thus, it will not display system temperatures, voltage details, or any other system information.

Moving inside, the MSI has decided to adopt a motherboard based on the tried and true SiS651 chipset, featuring both an AGP slot (perfect for gamers) and a PCI slot, as well as two memory slots supporting a maximum of 2GB DDR333 memory. Furthermore, like the Dream PC, the unit supports Pentium 4 processors with bus speeds of up to 533MHz.

Rounding out the Mega PC's feature-set is a handy little remote control, as well as an optional matching 2.0 speaker set which can be added for a meagre \$80 extra. Although the quality of sound produced from these isn't exactly

mind-blowing compared to a desktop rig that features an Audigy 2 and a 6.1 digital speaker system, it still provides respectable performance for both movie watchers as well gamers.

The Mega PC barebones kit itself comes in at a price of \$699, however, this is without a hard drive, videocard, CPU or any memory modules. When

these components are factored into the price you will most likely be looking at a figure well above that of the \$1999 Dream PC, however, the extra functionality provided, as well as the added AGP slot, for gamers at least, should be well worth it.

Asher Moses



PCPP Score

Feature rich, aesthetically pleasing and most importantly, it has an AGP slot!

90

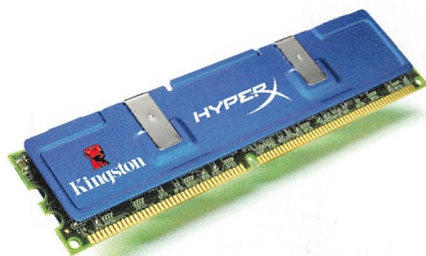


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Acer Aspire Entertainment Centre RC900



• Price: \$4,399 for configuration reviewed • Distributor: Acer • URL: www.acer.com.au

Now this is the kind of pre-built PC we like to see. Instead of a simple desktop machine, which any Joe Bloggs can build for at least 30% cheaper, the Acer Inspire actually has several features that make it a very interesting off the shelf computer.

In case you hadn't noticed, media PCs are all the rage, for good reason. Why bother having a separate video, TV, DVD player, radio and PC when you can squeeze all of this media madness into one box? The latest Aspire does just that, and it does it very well.

We had this machine up and running within two minutes of taking it out of the box - it's that easy. You'll notice in the product photograph that there's a nice big shiny dial on the front of the case. But it's no ordinary dial - it's actually a SUPER DIAL! Well, that's what Acer likes to call it. Using this dial, you can switch between the main functions of the Aspire: PC, Music, Video/DVD, Picture viewing, TV or FM radio. Each function has its own clear little interface that

operates independently of Windows, which allows you to browse the various storage locations on the PC, including the optical drives, hard drives or the variety of card readers mounted on the front. There's also an infra red remote for controlling these functions from the comfort of your favourite chair, but we found this to be a little temperamental. A wireless keyboard and mouse is also included to allow you to control the PC function from several metres away. Using the multimedia functions with these controls was ridiculously simple; we didn't even need to pick up the manual to figure it out.

When it comes to the guts within the snazzy silver case, it's up

to you what components you'd like to use. We'd recommend a soundcard that supports 5.1 surround sound, as well as a videocard with TV-out, just so you can make the most of this PC's media functions. Be prepared to pay a premium for the Aspire though, as it's by no means a budget PC.

Acer should be commended for keeping its finger on the pulse of IT hardware and building a machine that does everything PC users could desire. If you're after a pre-built PC that includes all the cool media features which are currently all the rage, look no further.

Bennett Ring

SPECIFICATIONS

- Intel Pentium 4 2.8GHz
- 1024MB PC2700 DDR-SDRAM
- 120GB hard drive
- DVD/RW Burner
- 17" LCD

PCPP Score

This multimedia powerhouse has all of the features any self respecting media lover could desire. Just be prepared to pay premium for it.

89



TrackIR GX



• Price: \$US\$129 for TrackIR GX, US\$20 for trackHAT • Distributor: Natural Point • URL: www.trackir.com

The TrackIR GX is in essence a web camera that is tuned to detect infra red light. Surrounding this camera are several IR LEDs, which bathe whatever sits in front of the unit in infra red light. The unit comes with 40 small reflective dots, and you'll need to stick one of these to your glasses, headphones or, if you're into the Cyborg Hindu look, the middle of your forehead. If you don't mind spending a little extra, you can now purchase the stylish TrackHat, which has reflective surfaces woven into it. Okay, it's not really that stylish, but it does the job without you having to stick anything to your head.

Fire up a game that supports the TrackIR Enhanced mode, such as LO:MAC, IL2 Forgotten Battles or Flight Simulator 2004, and the TrackIR will now use your head movements to control the camera within the virtual cockpit. Scared you've got a bandit on your six who is about to tear you a new jet exhaust port? Simply tilt your head slightly to the left or right, and you'll soon see if

there's anything worth lining your undies for. If you've set up the TrackIR software correctly, which isn't hard given the new intuitive interface, you won't need to tilt your head far to check the extremes of your in-game viewpoint, so there's no need to start pulling a Linda Blair to check your behind. A brilliant addition to the latest version provides a 'dead zone', so that you don't need to look perfectly stationary and forward to lock the camera view through your gunsights; a problem that plagued the original version.

The TrackIR isn't accurate enough for first person shooters, but it is perfect for simulations that have a full 3D cockpit. And once you've spent a couple of hours getting used to the device, you'll never use a sim's

padlock view ever again, and will be amazed at how much more immersive your games have become. Situational awareness will shoot through the roof, and as a result you'll be leaving more

piles of flaming wreckage in your wake than ever before.

If you're a flight sim fan, you need this device. It's as simple as that.

Bennett Ring

SPECIFICATIONS

- 40 dots
- Tracking unit
- Software CD-ROM
- USB extension cable

PCPP Score

The TrackIR GX is an innovative, must-have item for any self respecting fighter jock.

93





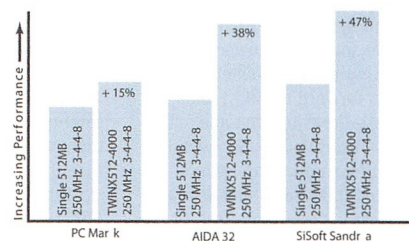
...but who follows the speed limit anyway?

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Single Channel vs. Dual Channel

(Performance on Asus P4C800 using common benchmarks)



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DIGN HV5

• Price: \$595 • Distributor: PC Case Gear • URL: www.pccasegear.com.au

Over the last couple of years, the humble PC case has undergone the same transformation that most geeks go through when they leave high school. Starting off as a boring beige brick that incurred the wrath of the très cool Apple crowd, it has now evolved into a box of pure designer joy, with a wide range of stylish facades begging to make your PC look extra hip. The DIGN HV5 is one of these new breed of slick PC cases, but just like the fashion transformation geeks go through on their way to becoming a yuppie, it costs a pretty packet to look this good.

Able to fit a full sized ATX motherboard within the interior, the HV5 is larger than most cases targeted at the home theatre crowd, but it's still small enough to comfortably fit within your hi-fi rack. Moreover, when it's sitting alongside your hi-fi gear, it won't look like a rapper at a Metallica concert - thanks to the swanky front fascia and gold coloured feet this case will fit in perfectly with your other hi-fi

equipment. An aluminium drive face plate is included so you needn't worry about purchasing a new DVD drive to make it look nice. Aluminium is used throughout, resulting in a very light final weight, even when you've installed all your gear. A pretty little LCD is mounted on the front, which displays information about your system, what's being played, as well as a bunch of other cool stuff. An infra red remote control is also included, along with the relevant software, to allow you to control your media functions from the couch.

A meager 200W power supply is included, but the manufacturers swear that it's fine for a high end CPU and videocard combination. Once you've installed a motherboard inside, there isn't a lot of room to move,

hence the small number of drive bays; you'll have to make do with one external 5.25" bay and one internal 3.5" bay. There are two mounts for 60mm fans to keep things nice and cool, with a single fan included. All internal edges are smooth, making the interior a finger friendly zone.

In this day and age of thumbscrews and screwdriver-less cases, the old fashioned screws on the HV5 are an unwelcome surprise.

However, perhaps the biggest surprise of all is its price - at a tad under \$600, this is one very expensive case. This is its biggest problem; nowadays you can get a relatively attractive box for half the price. However, as any geek who has metamorphosed into a fashionable young professional and is now picking up his fair share of the punani pie will attest, you can't put a price on good looks.

Bennett Ring

PCPP Score

Gorgeous but it's very expensive when compared to the rest of the designer crowd, and the 200W PSU is a bit of a worry.

77

SPECIFICATIONS

- Sparkle 200W Micro ATX PSU
- 430mm x 135mm x 452mm (WxHxD) aluminium construction
- Accommodates ATX motherboards



Zalman ZM-RS6F Surround Sound Headphones

• Price: \$69 • Distributor: Altech • URL: www.altech.com.au

A couple of years ago, after one of those creative nights that inevitably involves the consumption of at least 3 litres of beer, I had the brilliant idea for a set of surround sound headphones. Instead of the usual single speaker for each ear, why not put two speakers into each ear piece, to simulate a 4 speaker sound setup? Fast forward to today, and Zalman have done just that and, after using these headphones for several days, I can now understand why I should avoid thinking whilst drunk.

The first problem you'll encounter with these headphones is the fact that they have three separate plugs, just like a normal set of 5.1 speakers. Every time you want to switch between these headphones and your regular 5.1 speaker setup you'll need to get quite intimate with your soundcard ports on the back of your PC. Which, quite frankly, annoyed the crap outta me.

Once you have figured out which plug is which, you'll soon be amazed at the sound that comes out of these

headphones. Not because the fidelity is anything to write home to Ma about, but for the exact opposite - it's shocking. There is bugger all bass, with an overall tinny and scratchy sound to them. It's almost as if you're listening to one of those old AM radios that most parents tend to be fond of. This would be acceptable if the headphones cost ten bucks or so, but at seventy big ones you're going to be sorely disappointed.

But does the surround sound effect actually work? Well, yes and no. After a little bit of use you'll soon be able to tell whether the badguys are shooting you in the chest or in the buttocks - but the same effect can be modeled with a regular stereo set of headphones

and a decent soundcard. In all, the surround effect isn't anywhere near as impressive as that provided by a true 5.1 speaker setup.

The idea behind these headphones has some merit, but is spoiled thanks to the use of substandard speakers. Replace these

with some high quality units and we'd be the first to recommend them, but as they are now they simply don't cut the mustard. Oh well, the next version can't be too far off - here's hoping Zalman splash out a little more on the speakers used.

Bennett Ring

SPECIFICATIONS

- Frequency response = 50Hz - 20kHz
- Weight = 316 grams
- 3 headphone jack plug



PCPP Score

A nice job of simulating the surround sound effect but the poor sound quality of the speakers let the product down badly.

58

SOUND ON A BUDGET - SPEAKER SHOOTOUT

The Creative and Hercules 5.1 ensembles are similar in many ways and different in just a few. For each set there is a powered sub encased in wood for more undistorted, deep bass effects; five smallish plastic satellites with stands and fixed wires with analogue in/outs. There are separate RCA outputs for all five speakers, input to the controller in the sub is by a triple-line 3.5mm stereo mini-jack each for the fronts and the surrounds, and a combination centre/sub. The Creative's input cable

jacks are colour coded, unlike the Hercules which takes a little thought, pen and paper. If the centre/sub input can't be utilised there is still some sub output via the other channels but you will need to play with the cross-over frequency in your mixer software. There's 2-3m of cable on the fronts and centre, 4-6m on the rears and the input cable is 2m. The Creatives are controlled by a wired DIN-plug remote and the Hercules' controls are on the sub. All satellite drivers are paper cones at 3 inches and the subs at 5

inches. Both sets are compatible with a range of sound formats (DS3D, EAX 2.1, A3D 1.0 etc) and Dolby/AC3 decoders, which is more a function of the soundcard, but that's how they're marketed! The Hercules boasts slightly higher electronic specs for RMS power, dynamic frequency response and Signal to Noise Ratio that might make a difference at this price point. A too low SNR may make a mockery of higher-end soundcards. Instructions are rudimentary and setup is straight forward but

activating the soundcard channels, determining audio mix and physical positioning will take a little longer. Neither sub had a noticeable hum at high volume with no input. You will need to understand how your own soundcard works and is configured to make the most of the six speakers; nearly all soundcards can be configured with software drivers. For testing, I utilised an Audigy 5.1 soundcard, WMP9 and PowerDVD v-5 using various DVD movies, music formats and EAX supported games.

Creative Inspire 5200

• Price: \$179 • Distributor: Creative • URL: australia.creative.com

These are the same speakers that you can find in the DTT2200 system no longer made by Cambridge SoundWorks, which incidentally I

found anyway, bundled with an SB Live! DE 5.1 for \$370. The bass is there and the satellites have a good frequency response considering their



size and driver construction. The sideported sub is a bit under powered, but at a moderate volume it's good enough and contributes effectively to the surround sensation. I found there tended to be a real "whuff" as it tried to move the air required of it, particularly with music and low sonics in games. Music both MPS and CD-DA sounded just great once I balanced the speakers in CreativeMixer. The sound tracks and effects from the EAX game Half-Life were superb and The Matrix Lobby Scene was reproduced in an outstanding manner, if you consider the entry point these speakers represent in the market.

Stuart Calvin

SPECIFICATIONS

- 6W RMS per satellite
- 17W RMS subwoofer (35-180Hz)
- EAX/DirectSound 3D game and 5.1 soundcard compatible
- Dynamic frequency response from 40Hz-20KHz
- 75dB SNR
- CMSS(r) upmix technology for 5.1 surround sound with 4-channel Sound Blaster(r) soundcards
- IFP(tm) (Image Focusing Plate) driver design
- Wired volume/bass control with power switch and headphone jack

Hercules XPS510

• Price: \$189 • Distributor: BCN Technology • URL: au.hercules.com

The XPS510 or The eXtended Personal Sound 5.1 speaker system is the budget surround option from Hercules, now owned by Guillemot. Great bass but the satellites took some software tweaking and physical positioning to eliminate the tinny car-radio sound I first encountered. The sub's driver is hidden behind two front ports, which means that a stout kick during a UT death-match won't kill the cone. On the back of the subwoofer is a full height, black heatsink. This helps keep the unit cool after extended periods of use - perhaps a good idea for hard k0re gamers. The frequency response from the satellites was still good, again considering their size and paper cone construction on the

drivers. I did get higher volumes from the Hercules system compared to the Creative system and the bass is far better in the Hercules. The DVD movie action scenes from Saving Private Ryan are more than acceptable, digital music, both MP3 and CD-DA formats, is faithfully reproduced and again

some EAX gaming was a h00t. Exploding grenades and falling brass behind you is always, shall we say, less than enervating. If your keyboard does have a volume control or you

make use of a mixer, a lack of a remote with the XPS510 won't trouble you. I recommend turning off the surround speakers to faithfully reproduce stereo music.

Stuart Calvin

SPECIFICATIONS

- 8W RMS per satellite
- 20W RMS subwoofer
- EAX/DirectSound 3D game and 5.1 soundcard compatible
- Dynamic frequency response from 35Hz-20KHz
- 85dB SNR
- Wooden case subwoofer with bass, volume and On/Off switch
- Three year warranty



PCPP Score

Given that similar digital speaker sets are another \$300-\$350, you can still step up to 5.1 channels at a budget price with either set. Lack of a remote on the Hercules will be moot for many gamers but could influence gamers who want one. Overall, the Creative Inspire 5200 is just pipped this time around by the Hercules XPS510 with its better sound reproduction.

CI: 76 HXP: 79

Bennett Ring Powertools

In Issue 91 of PC PowerPlay we explained to you how we'd come up with our new suite of benchmarks. For those of you who didn't read this section, thanks a lot, it took me bloody ages to figure out which benchmarks were the best for our reviews. No pudding for you, sonny Jim. For your benefit I'll explain once again how we determined which benchmarks were best to use.

When deciding on our new suite of benchmarks, we focused almost exclusively on game based benchmarks. After all, PC PowerPlay is all about the games, so there's no point in knowing if a

given piece of hardware will make your Photoshop filters run faster - we just want to know how fast our beloved games will run. It's also less likely for the hardware vendors to include special optimisations in their drivers if we use games rather than synthetic benchmarks.

We then contacted AMD, Intel, NVIDIA and ATI to see which games they recommended for use as benchmarks on their hardware. For our videocard tests, we plucked out the games that both NVIDIA and ATI recommended. By doing so, we can avoid the inevitable claims of benchmark bias that are usually hurled at hardware reviewers.

These game benchmarks were then tested to make sure they scaled well. In other words, do their results accurately reflect an increase in performance when more powerful videocards are used, and do they highlight the drop in framerates when users increase resolution and enable fancy image quality effects such as anti-aliasing and anisotropic filtering? Those games that didn't scale well were dropped from the list. In the end, we settled on three games and one synthetic test that will be the basis for our videocard reviews.

You'll notice that none of our games make use of DirectX 9.0

features. That's because there are hardly any games out yet that use these features - the only title that springs to mind is the latest Tomb Raider abortive mess. However, DX9 games should be flowing thick and fast as we approach Christmas, so we'll be adding a DX9 benchmark or two as they become available.

While we tried extra hard to make sure all of our benchmarks were based on games, we decided to use 3DMark2001SE for one simple reason - it's a great benchmark that scales brilliantly. And unlike 3DMark03, 2001SE hasn't been accused of bias towards ATI hardware. 'Nuff said.

Quake 3 Arena: Demo 1

Yes it's old, but most of you probably have a copy of Q3A lying around somewhere, so you can run the same benchmark at home, and then compare your results with our review results. We run this demo with all settings maxed, at three different resolutions: 1024 x 768, 1280 x 1024 and 1600 x 1200.

3DMark2001 Second Edition v330

A DirectX 8.1 benchmark that was released almost three years ago, this benchmark is free to download, so you can run it at home to see how your PC shapes up compared to hardware we're reviewing. While it's nearly three years old, we still haven't seen game graphics that come close to the visuals in the Nature test in 3DMark2001SE. Again, we run this benchmark at 1024x768, 1280x1024 and 1600x1200.

Serious Sam: Second Encounter Jaguar Demo

An OpenGL benchmark, Serious Sam crams an amazing number of enemy

models into huge open maps. As a result, it's a nice benchmark for making your videocard squeal in agony, and the Jaguar demo in particular is renowned for being the most demanding demo within Serious Sam: SE. Can you guess which resolution we run this benchmark at? Give yourself a gold star if you said 1024x768, 1280x1024 and 1600x1200.

[H]ardOCP UT2K3 benchmark v2.1

You've gotta love dual purpose benchmarks. Not only is it great for thrashing your CPU, motherboard and memory, but the high quality setting in this benchmark makes it perfect for videocard testing. It's the most taxing videocard benchmark in use, and we run it at the same three resolutions as the other three videocard benchmarks. We also use this benchmark for testing anti-aliasing and anisotropic filtering. For both of these tests, the resolution is set at 1280x1024, with a variety of AA and AF settings. AF quality is always set to the highest the videocard drivers will allow.

TEST BENCHES

Intel Test Bench (x2) Intel Pentium 4 2.6C

HIS RADEON 9700 PRO
www.something.com
Corsair 2 x 256MB XMS3200LL DDR400
www.something.com
Seagate Barracuda 7200.7 160GB ATA100 Hard Drive
www.something.com
ABIT IS7 865PE motherboard
www.something.com
TOPOWER 470W PSU
www.something.com
Mitsubishi Diamond View 2115e 21" monitor
www.something.com
Microsoft multimedia keyboard and optical mouse
www.something.com
Windows XP Professional
www.something.com

AMD Test Bench (x1) AMD Athlon XP 2600+

HIS RADEON 9700 PRO
www.something.com
Corsair 2 x 256MB XMS3200LL DDR400
www.something.com
Seagate Barracuda 7200.7 160GB ATA100 Hard Drive
www.something.com
ABIT NF7-S
www.something.com
TOPOWER 470W PSU
www.something.com
Mitsubishi Mitsubishi Diamond View 2115e 21" monitor
www.something.com
Microsoft multimedia keyboard and optical mouse
www.something.com
Windows XP Professional
www.something.com



www.akatech.com.au



www.corsairmicro.com



www.auspcmarket.com.au



www.intel.com



www.abit.com.tw



www.amd.com



www.seagate.com



www.hightech.com.hk



www.altech.com.au



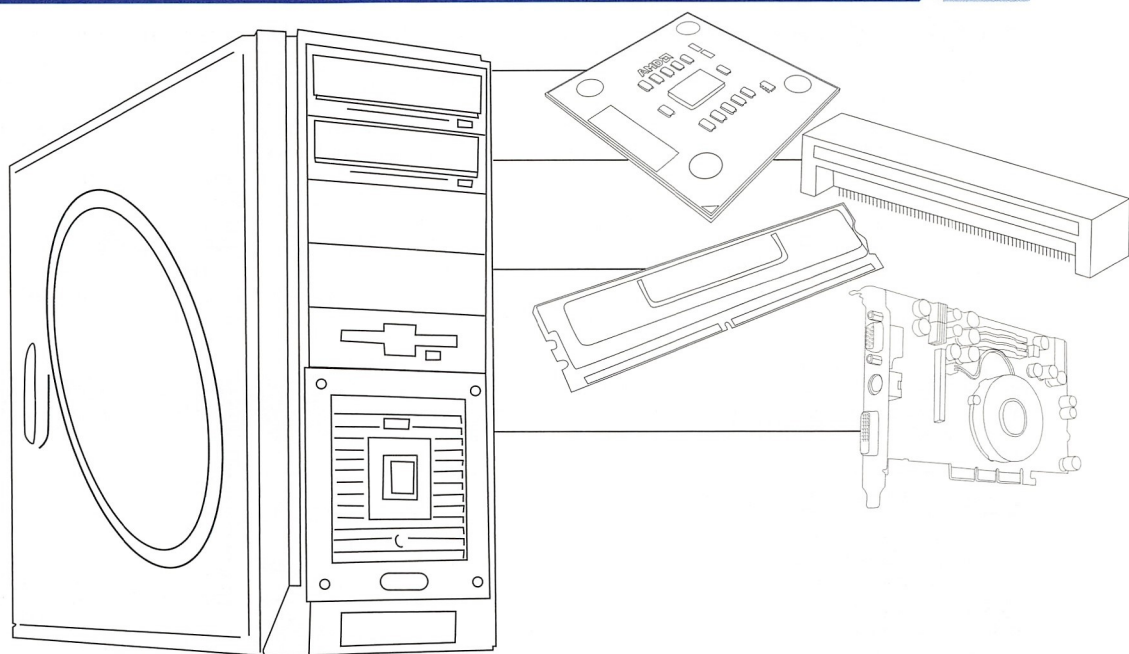
MITSUBISHI ELECTRIC AUSTRALIA

www.mitsubishi-electric.com.au

Stuart Calvin

Decrypt

Like the graphics adaptor, a soundcard is critical to the virtual tactile experience and enjoyment of a computer game, and contributes enormously to the feeling of immersion game developers want in their products. A significant amount of a game development budget (or so we hope!) is hived off to music and sound effects, where professional sound engineers and musicians are allowed to strut their stuff. What would life have been like without the soundtracks from Doom? To be fair to this difficult and considered work we should understand some of the jargon surrounding sound (pun!) and continue to save to buy, as Bennett would say, "more Gingko!" (Note from Bennett - why stop at overclocking your CPU when you can overclock your brain!).



Analogue sound:

Best described as continuous sound, as opposed to digital sound, which is a series of discrete on/off signals. Vinyl records output analogue sound, while CDs provide digital sound. The most immediate audible difference is that analogue recordings sound warmer and more rounded than digital. Digital recordings are, however, more accurate.

Enable digital CD audio for this CD-ROM device:

Digital CD Audio by Microsoft permits Digital Output through the IDE cable rather than an audio cable. You can enable digital audio via the device's properties in Device Manager. S/PDIF (Sony/Philips Digital Interconnect Format): It's the choice for sound output. Look for the additional connectors on the soundcard.

S/PDIF Optical Input/Output:

Often marketed as Toslink and can often be cheap, plastic-like Mylar passing as optic fibre. Optical sound is good for a metre or so and is more suited to home entertainment centres. It can be effectively arranged if a multimedia rig is close enough to the AV receiver.

S/PDIF Co-axial Input/Output:

This looks like an RCA video connector and cable but it's a different transmission format. It requires a properly terminated 75Ohm cable. It's good for 7-8 metres and is the choice of gamers.

DAC (Digital to

Analogue Converter):

Unless the entire sound system, including speakers, are digital capable, then at some point the sound must be converted. The last safe point is just before output to the speakers. The worst point is the low end DAC in a CD-ROM. A company by the name of AKM makes very high quality DACs and these are found on high end cards from M-Audio and Terratec. If at some point your sound is to be converted, a good soundcard DAC will avoid the cheap and nasty DAC in the CD/DVD-ROM.

PCM (Pulse Code Modulation):

This is a recording format, in which music signals are converted into digital data for each sampling frequency. Often referred to as Stereo, PCM is the only format that saves the entire sound wave completely with no data loss.

44KHz:

The Philips Red Book specification for audio CDs ('cos the book is red) chose 44100 samples per second, where each sample is 16-bit stereo PCM. PCM is a fine choice for encoding audio, stereo is widely recognised and supported, and it's very easy to manipulate data in 16-bit quantities with existing hardware and software. Why 44100? Why not make it a round decimal value like 44000, or a round binary quantity like 44032? In most cases, the human ear can hear tones out to about 20KHz. Theory is, that you have to sample at twice that rate and because of imperfections in filtering, you actually want to be a little above 40KHz.

Reverb Engine:

The reverberation engine tries to recreate the sound of a specific environment to provide the depth and realism envisaged by the game developer. Features such as Panning, Reflections, Filtering and Occlusion makes spatialising and localising environments in 3D possible. The 3D sound and reverb engine your soundcard uses determines what game APIs are supported (e.g. DS3D, A3D, EAX) and more importantly the accuracy of the positioning of the sound sources and the quality of the reverb. CPU and Frame Rate hit, the number of 3D sound streams and the basic sound quality, can differ significantly between soundcard chipsets using the same 3D sound and reverb engine.

DS3D:

All cards that claim to support 3D sound should support DirectSound 3D, a part of DirectX. It's the card's 3D sound engine, and not the API, that makes the difference in what you hear. If the card doesn't support DS3D, the developer can choose to use the 3D sound engine that's part of DirectX but very few games commit to this. It's worth noting that the software 3D engine component of DirectX will only work if you use WDM drivers, when using the VXD drivers it will only be stereo panning.

EAX (Environmental Audio eXtension):

This is the reverb API that Creative Labs introduced with the Live in 1998. It's an extension to DS3D that enables the developer to

select what type of room you're currently located in. Supported in just about every game, it provides the biggest hit to Frame rates.

Surround Sound:

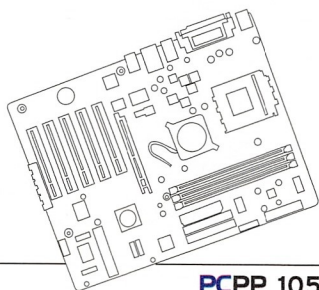
This creates a stirring auditorium acoustic effect and an atmosphere similar to that which you would experience in a concert hall or arena.

Dolby Digital:

Also known as AC3, provides multi-channel sound and effects through discreet speakers. It's compressed to about one-twelfth of its original size.

DTS (Digital Theatre Sound):

Like Dolby Digital, this also provides multi-channel sound but is compressed only to a quarter of original size. **5.1:** The first figure represents the number of main frequency channels; in this case, two front, a dialogue centre, two rear surround effects and the second number represents the LFE speaker (low frequency effects) or sub-woofer. Seven and eight channel soundcard systems are now available, adding a centre rear (6.1) or two side speakers (7.1).



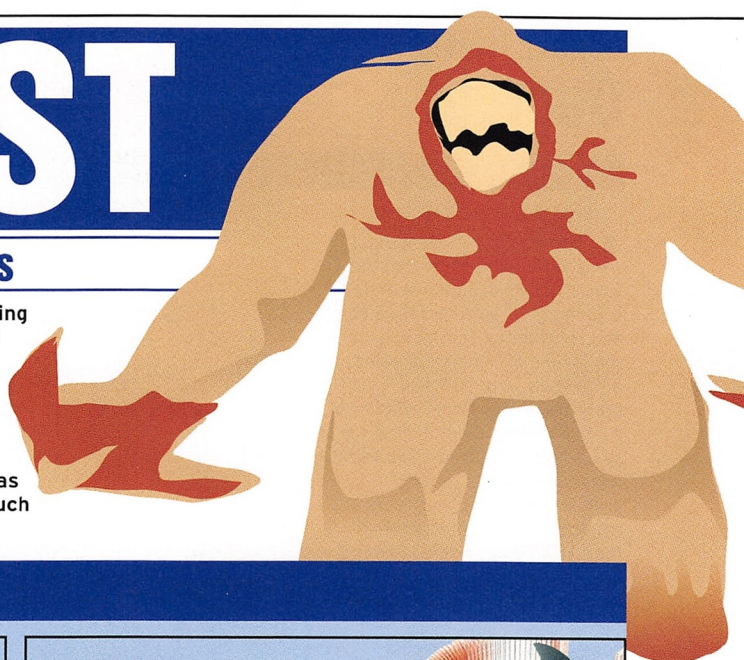
THE BEAST



In association with Altech Computers

There haven't been too many changes in any of the three gaming powerhouses this month, as there hasn't really been any mind spasmingly great hardware released.

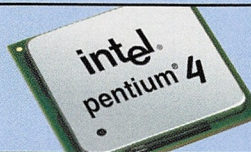
We realised that the mouse in use on these machines didn't quite live up to the lofty heights of the rest of the components, so this month we've dropped a Logitech MX700 into both the Beast and the Mutant. You'll also notice that we've yanked the Corsair water cooling kit out of the Mutant, as it simply wasn't necessary when the stock Intel cooler does such a great job.



CPU, MEMORY AND MOTHERBOARD

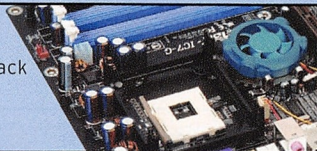
Intel Pentium 4 3.2GHz 800MHz FSB

Still the fastest chip out of the box, seriously scaring everything from AMD. However, let's hope Intel doesn't rest on its laurels. Bring on 4GHz!
\$1228 www.intel.com



Abit IC7-G 'Canterwood'

A hella board in a hella package that includes everything from an extra USB back plate to black rounded IDE cables. And it's powered by Cantertwood - Serial ATA RAID goodness!
\$360 www.abit.com.tw



1GB Corsair TWINX-4000

A gigabyte of DDR500 RAM for \$770. That is just crazy cheap, especially when the RAM in question is this blisteringly fast. The perfect complement to the IC7-G.
\$660 www.corsairmemory.com



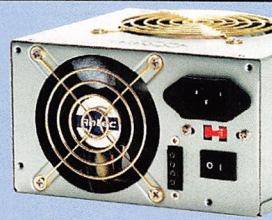
Zalman 7000-Cu

The Beast is so chunky, so wild and untameable that you need a real man's cooler stuck on the top of your mighty CPU. Zalman delivers, offering a chunk of metal that performs well and isn't too screamingly loud.
\$75 www.zalman.co.kr



Antec TruePower 550W

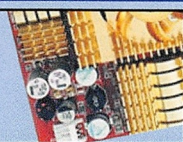
With 550 watts of blistering power you can plug in as many crazy case fans, cooling systems and front-mounted LCD panels as you like and still enjoy smooth, reliable gaming.
\$233 www.antec-inc.com



VIDEO, AUDIO AND CONNECTIVITY

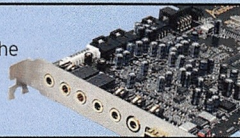
Gigacube RADEON 9800 PRO 256MB

With more onboard memory than some people's whole PC, the 256MB version of the Radeon 9800 Pro will get your FSAA performance up and keep it up.
\$870 www.gigacube.com.tw



Creative Soundblaster Audigy 2 Platinum

The most powerful consumer-level soundcard on the market. Support for every sound format, including Dolby 6.1 surround.
\$415 australia.creative.com



Creative Inspire 6600 6.1

Let your soundcard handle all the decoding and plug these cheap but powerful speakers into the ports on the back. An extra rear channel beefs your gaming surround!
\$271 australia.creative.com



STORAGE AND OPTICAL

Sony DRU510A DVD +/- R/RW

Almost but not quite cheap enough for mere mortals to own, this Sony drive will burn DVDs and CDs at 4X and 24X respectively - tasty!
\$680 www.sony.com.au



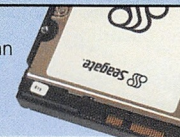
Samsung 816BRPS 16x DVD-ROM

It's straight up and down, it's cheap, it's fast, it works well and you need it to copy - sorry, back up - DVDs using your nifty writer.
\$73 www.samsung.com.au



2x Seagate 120GB Serial ATA in RAID 0

Thanks to the IC7-G's support for Serial ATA RAID, you can run your 120GB in super-fast RAID 0 mode for even quicker load times - and to be damn cool too, of course.
\$518 www.seagate.com



DISPLAY, INPUT AND COSMETICS

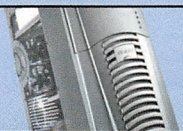
21" Sony FD Trinitron G520

Until large LCD catches up with small LCD the Beast will stick with dependable, mature, established CRT. And the G520 is one of the best in the business.
\$1960 www.sony.com.au



Antec PlusView 100AMG

It may not be the Rolls Royce of cases but it's roomy, has a built in side window and it has all of Antec's various quick access features. Take note, Lian-Li.
\$171 www.antec-inc.com



Logitech Elite Black

Smooth mechanism, funky styling and support for both PS/2 and USB make this keyboard the right choice. Real men use ergonomic keyboards though, don't forget.
\$88 www.logitech.com



Logitech MX700 wireless mouse.

Normally we wouldn't recommend a wireless mouse for gaming, but the MX700 is an exception due to its high refresh rate.
\$169 www.logitech.com



BEAST VALUE:

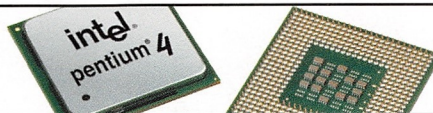
\$7911

THE MUTANT

Thanks to the popularity of overclocking and tweaking, we've included this machine to show you exactly what you can get away with for not much outlay. Tweaked to within an inch of its life, this is the machine we DO own, versus the Beast, which is the machine we'd like to be able to AFFORD to own.

Intel P4 2.4GHz "C"

at 3.3GHz
Truly the most overclockable of all modern CPUs, the 2.4C can be run a staggering 900MHz over its stock speed. With the standard Intel HSF. Now that's value.
\$320 www.intel.com



Abit IS7 'Springdale'

Yes, it's the cut-down version of The Beast's IC7-G, but it's still well beefy enough to support a furious thrashing and your extra fast running CPU. Springdale is like Canterwood without all the fancy extras.
\$229 www.abit.com.tw



Logitech Elite Black keyboard and MX700 mouse

If it's good enough for the Beast, it's good enough for the Mutant. Sure, both of these components aren't exactly cheap, but you can't skimp on the interface between you and your box of love. And for a wireless mouse, the MX700 is a ripper.
\$257 www.logitech.com.au



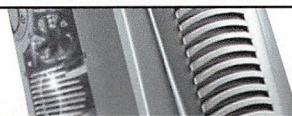
Antec TrueControl 550W

What could be groovier than a PSU that comes with a 5.25" front plate with dials and knobs for controlling fan speed plastered all over it? Nothing, that's what.
\$229 www.antec-inc.com



Antec PlusView 1000AMG

What's good enough for the Beast is good enough for the Creature, especially where the price is right. And with this machine, you'll definitely make the most of the side window.
\$171 www.antec-inc.com



512MB Corsair TWINX-3200LL

Ah the half-gig sweet spot, is there nothing finer? This RAM is beefy enough to support a bit of tweaking, so perhaps you can drag a little extra performance out of it?
\$300 www.corsairmemory.com



Gigacube RADEON 9800 PRO 128MB

Amusingly, the video card is the single most expensive component of the Creature. It's hard to believe that you can now get a RADEON 9800 PRO for a mere \$660, considering just how blazingly fast this video card.
\$660 www.gigacube.com.tw



Zalman VGA Heatpipe Cooler 80C-HP

Bolt this mighty thing to your video card, attach the included fan, and who knows what insane core speeds you can achieve?
\$60 www.zalman.co.kr



120GB Seagate IDE

The first upgrade HDD I ever bought was 6GB and cost \$447. So this is pretty damn cheap. Only standard IDE, but at this price we can't complain.
\$184 www.seagate.com



Creative SB Audigy

Lacks a few of the features found on the Audigy 2, but only the ones that don't really have much effect on gaming. There's a lot of soundcard here for not much cost.
\$159 australia.creative.com



Creative Inspire 6.1 6600

They're so cheap they're good enough for the Creature too. No decoder, no difficult optical inputs, just ordinary wires plugging in to a set of extraordinary speakers.
\$271 australia.creative.com



Samsung 816BPRS 16x DVD-ROM

Same as the Beast, this drive is fast, dependable and has a slightly funkier facade than most of the beige monstrosities currently available.
\$73 www.samsung.com.au



Samsung 252BRNS 52x24x52 CD-RW

Wow, these things sure got cheap didn't they? Burn CDs in hardly any time at all thanks to 52x writing. Backup all your digital LAN shots for posterity. Pose nude... no wait, don't.
\$80 www.samsung.com.au



19" Samsung 995 Dynafiat

Cheaper than the video card but still a lot of sleek, flat monitor. Nineteen inches is pretty much the minimum for decent gaming, and we can't wait until a 16ms LCD this big costs this much.
\$522 www.samsung.com.au



4x Antec USB Light Sticks

Pep up the Creature with a few light sticks. Stick 'em on the monitor, in the case, wherever you like. USB powered and respond to sound - clap on, clap off! Other cosmetic additions to the Creature are limited only by your imagination.
\$132 www.antec-inc.com



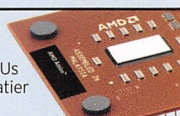
MUTANT VALUE: \$3647

the beastie

The cheapest but worthiest PC of all, the Beastie is for all of use who need gaming, the web and to generally have fun without worrying about overclocking or our bank account.

AMD -Athon XP 2500+ Barton

The cheapest CPUs keep getting meatier and meatier
\$170 www.amd.com



Abit NF7
nForce2 is good and this implementation of it is even better
www.abit.com.tw \$181

Antec Lanboy

Includes a 350W power supply, window and carry strap.
\$185
www.antec-inc.com



512MB Corsair PC-3200
A budget PC with half a gig of RAM. All praise the open market.
\$199
www.corsairmemory.com

Gigacube RADEON 9800

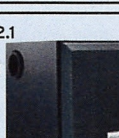
Yes, a 9800 in a budget system. Holy shit batman.
\$520
www.gigacube.com.tw



60GB Seagate IDE
Plenty of room for not much cash. Dependable and reliable.
\$149
www.seagate.com

Creative Inspire 2400 2.1

Plug 'em in to the nForce2's onboard sound and it's MP3-tastic!
\$90
australia.creative.com



Samsung 816BPRS 16x DVD-ROM

Good enough for all the PCs on this page, swift and reliable.
\$73
www.samsung.com.au



Samsung 252BRNS 52x24x52 CD-RW

Cheap, fast, reliable, what more could you want from a CD-RW?
\$80 www.samsung.com.au



17" Samsung SyncMaster 753S
To think flat screen 17" monitors were once worth \$800. I love the future.
\$256 www.samsung.com.au

KME Wireless Keyboard and Mouse

A sleek combo, wire free for mad ranting around the room after losing at CS
\$73 www.kmepc.com



beastie value: \$1976

So, you want one of these three fine beasts? Luckily, all of these components are available at
Altech Computers
www.altech.com.au
02 9735 5655



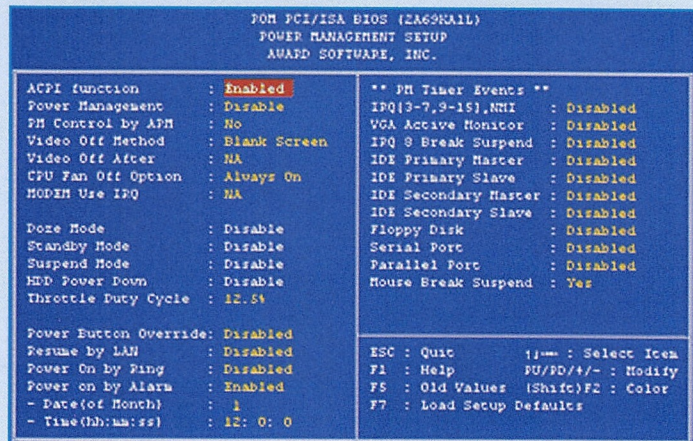
SETUP



WRITE TO SETUP AT:

Setup
PC Powerplay
78 Renwick St
Redfern
NSW 2016

setup@pcpowerplay.com.au



SUCKING VORTEX

Q I have a Soyo 7VMA-B and upgraded my video to a Leadtek A340 FX5200. Problem is that it sucks me into a vortex of restarts whenever I start my games. My specs are a P3-700, 384MB SDRAM, 60GB disk, LITE-ON 48/16 CD-RW/DVD combo, Vibra 128 sound and a Realtek LAN. I have removed all the old drivers installed the A340 v-4.3.5.1 and Hyperion drivers. I'm running XPPro and all the games like Deus Ex and Half-Life run on the old video but crash at various points, usually with a MS Visual C++ error when using the FX5200. The event log says Deus Ex had a fault in the module core.dll while Half-Life hangs. The system log shows "AMLI: ACPI BIOS is attempting to read from an illegal IO port address". I can start Deus Ex in safe mode with 3D sound off and everything else on. Dazed and confused as always.

PS: love reading your bit.

Joe

A It could be one or a combination of popular problems with software drivers, but more likely, it's a software conflict. Given the "3D sound off" result, try reinstalling the DirectX version that these games require, usually the one on the game CD. A core dynamic link library or CORE.DLL fault is generally a clash of file versions and was a real problem when people upgraded from Win95 to Win98 in June 1998 and file versions went to hell. This particular .DLL is a purposeful module that provides initial functionality of a program, basically it's the "control/interface" and most games have them. Most of the

functions in core.dll are "C" call-able and given your C++ error, I'd bet on a file problem, be it a sound, chipset or video adaptor file even though you're in XP and those damn games run on the old videocard. Reinstall everything except the games. Uninstall sound and video software via the control panel first then uninstall all software driven hardware from Device Manager. Reinstall everything, trying different Hyperion driver sets, including the games and let me know how you go. The "ACPI BIOS" error falls into two schools of thought. The first is to "upgrade your BIOS" and the second is that it's a 'driver issue'. The newsgroups are evenly split over what works best, but www.soyo.com.tw doesn't tell me what BIOS Revision: 7VMA-B_2AA1 can do for you, so I'd try a full driver reload before upgrading the BIOS. It was also heartening to see evidence, throughout the newsgroups, of the Taiwanese vendor's willingness to bring out a new BIOS on the basis of just one individual's email; maybe you could contact them and check their advice.

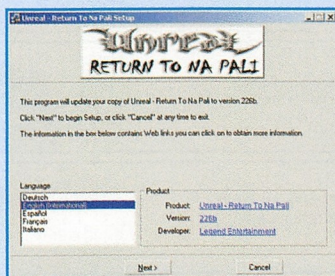
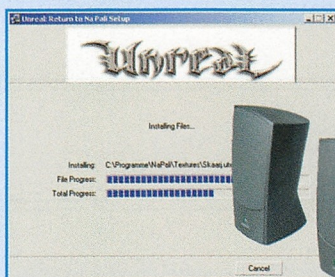
UNREAL ERROR

Q I recently bought Unreal 2: The Awakening. Just on 43% installation, a catastrophic error appeared (extremely catastrophic 'cause now I can't play it). What the??? Not Again. I am not even sure what this means as the PCPP demo worked fine. Anyway, I deleted the game files because I couldn't uninstall them, and now the install option is greyed out in the AutoRun and the setup file says it can't run the setup program because an "installation support

file cannot be installed". The same thing also occurred in Red Faction.

Simon Cambell

A The installation problem can be overcome if you are prepared to fiddle with the registry. Use [F3] to navigate in regedit.exe and find all /infogrames/unreal2/ folders and delete them AFTER you have backed up the registry. This is a blunt approach but effective and will stomp on any offending registry values obstructing a reinstall. Your Red Faction installation can be similarly fixed by searching for /Volition/Red Faction/. A demo game is not the full Monty and one must not think that a full retail version won't fool around in your system anywhere less than the demo. If you play in WinXP or WinMe, you should set a restore point before installing anything. In Win98, you can backup the registry via System Tools and reload it in DOS, if anything goes wrong, using <scanreg /restore> [Enter] at the prompt and choosing the latest backup.



SPEAKER EASY

Q Whenever I turn on my speakers to a reasonable volume, such as 50% of their full capacity, I can hear the sort of interference you would on the radio above whatever sound is playing. As you can imagine, this is quite annoying. My speakers are Logitech Soundman X2 (2.1) and I've had them for about 3 years. I've

cleaned the ends of the cables to no avail. This used to happen before I got the SoundBlaster DE5.1 soundcard but it ceased after I installed it. However, the problem has reoccurred and it is getting worse, please help!

Err0r_404

A Try your speakers on another PC, as there's nothing in this to say that the powered amplifier is dying on you or there is a break in the speaker cable, but both are possibilities. Dropping a heavy, blunt object like a case of beer can fracture the crappy 'rat tail' cable wire bundled with many speaker sets, and budget speakers are not known for their longevity. Nevertheless, most problems can be traced to a recent software installation that has broken something else. Dare I say it? Uninstall and reinstall your soundcard drivers and, if that's not OK, then try a new speaker cable.



AGP WOES

Q First, are you able to use a AGP 8x card in a AGP 4x Slot? My MoBo only supports AGP 2x/4x and I really don't want to upgrade again. Which is the best card in the mid-range price of \$300-\$400 that supports DirectX9? I was looking at the GeForce FX5600 or the RADEON 9600Pro. And by the way, is the RADEON 9500Pro still available? Great Mag. Keep up the great work!

Michael

A Most AGP 3.0 8x video adaptors will not run in an AGP 2.0 4x slot and certainly will not run in an AGP 1.0 1x/2x slot.

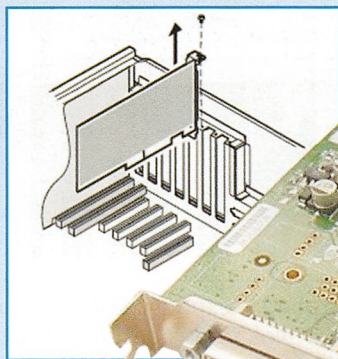
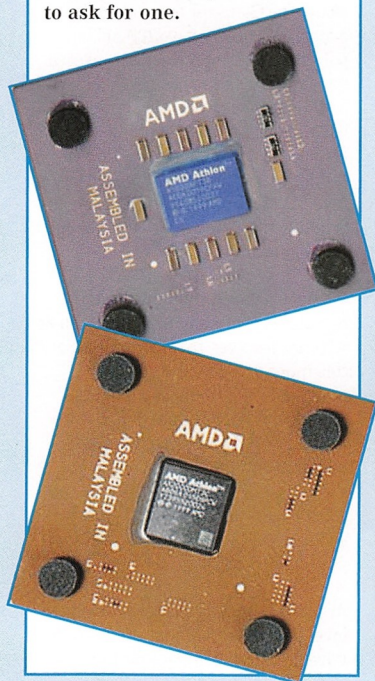
Then there are supposed AGP 1.0 2x/4x adaptors but implementation was poor and confusing - all of which just annoys the fruck out of me. All compatibility issues surround poor vendor implementation (AGP 2x/4x), protocol versions, signalling/voltage and mechanical requirements of the interface. Then again, some readers amaze me with the combinations they have running. Generally, AGP 1.0 cards (1x and 2x capable) have no problems with AGP 2.0 motherboards (1x, 2x, 4x capable) and vice versa. You will have to work with your vendor's website and your PC store to discover your upgrade options. The Gigabyte GA-7N400Pro is pretty good value if you have the spare dosh and really want a sure-fire solution. By the time you read this, www.secret.com.au will have the Albatron FX5600-CP at around \$250 and a Gigacube RADEON 9600Pro for about \$260. As far as I know, the www.discshop.com.au in Queensland may still sell the RADEON 9500Pro.

UPGRADE AMD

Q I have a 1GHz AMD T-Bird running on an A7V133 MoBo, and am hoping to upgrade to an AMD XP 2GHz. Does my MoBo support it?

Rupert Kiddle

A The original ASUS A7V133 supported the Athlon and Duron from 550MHz to 1300MHz on a 200/266MHz FSB. If you have a PCB Revision of 1.05 and BIOS 1007 then you can run an XP2100+ and that's it (Palomino 1733MHz @ 13x on a 266MHz FSB). If your PCB revision is an original then you're stuck at a 1.4 T-Bird with BIOS 1005. And while we're at it, an "XP 2GHz" is the Thoroughbred XP2400+ in case you ever need to ask for one.

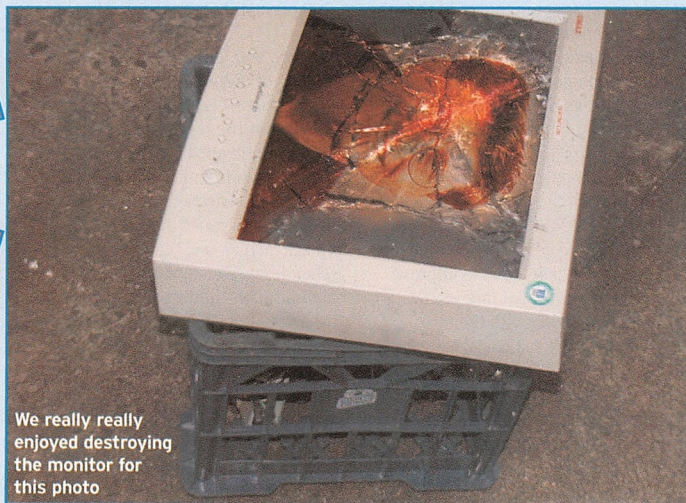


SWITCH ON SWITCH OFF

Q Every time I turn on my computer after it has been off for a few hours, I am able to do things as normal for about two minutes. Then, the monitor freezes, and then resumes as normal. Then it will freeze again, and return to normal again. It does this several times. Eventually, it will freeze, and then restart itself. Then when it's rebooted itself, I can continue without problems - that is, until I run a 3D game. Any 3D game after the first reboot will cause it to reboot again. Then, after it's done that, and I'm in for the third time, everything is fine. Then, I turn it off, and the next day, I turn it on, and the cycle begins anew. Do you have any idea as to what is causing this bizarre problem?

Josh

A I have no clear idea because of the "third time" phenomenon! Try your monitor on a known, good PC (home, work or friend). If the monitor doesn't work on a known, good PC, then the monitor itself is in league with Satan and needs replacement. If the monitor does work, it might be that your videocard is problematic. Try a known, good video adaptor in your PC. If it works, then it's your videocard riding to Hell. If all the known, good stuff advice works, then you have a sub-system problem like a virus or driver corruption. Something like the Parite virus that attaches itself to all sorts of executables, will cause strange things to occur. The on-line scan from Trend Micro will detect it as will the free-ware from Grisoft.



We really really enjoyed destroying the monitor for this photo

TO OVERCLOCK?

Q I have a Rev 2 GA-7VRXP motherboard, Athlon XP1800+, 512MB PC2700, 128MB GeForce4 Ti4200 and WinXP. I want to upgrade my CPU to an XP2600+, but my problem is the 266MHz FSB and I need 333MHz. According to my motherboard, it can only take up to 266MHz FSB, but it can be manually set to 333MHz in the overclocking area of the BIOS. In theory this would allow me to have an XP2600+ at its correct FSB settings. There is a BIOS update that I haven't done yet for my MoBo that allows it to recognise XP2600+, does this mean only a 266MHz FSB or does it override and O/C the motherboard to correctly detect the XP2600?

Jasper

A There are two 'versions' of the Thoroughbred XP2600+, one at 2133MHz on a 266MHz FSB, which is the limit for your MoBo, and one at 2083MHz on a 333MHz FSB. In terms of stability, I doubt the O/C feature of your board would work well at all. But adding another 600MHz to the CPU bottom line (1800+ to 2600+) would be a worthwhile upgrade if you couldn't afford a 333MHz MoBo like the 7N400Pro for \$180 and, say, a Barton 2500+ for about \$160. The OPN, if you need it, for the 266MHz FSB 2600+ is AXDA2600DKV3C.



If you are going to overclock your PC then for pity's sake be careful!

DRIVE NOT RECOGNISED

Q I recently purchased a new DVD drive, although after installing it the computer won't recognise the drive. I switched the cables (IDE, audio and power) from the former drive into the correct sockets in the new one. The manual is pretty, well, useless but says something about a slave/master cable, but not if I need one or where it's to go. I also reconnected the original drive to make sure the components weren't damaged and it was fine. My computer is an IBM with a P4-2GHz processor, 256MB of RAM and an Intel integrated graphics chipset. The DVD drive is a BENQ 16x DVD / 50x CD.

Elliot Hazel

There are literally hundreds of CD/DVD/CD-RW related issues in the MS Knowledge Base, but try searching anyway because your

A OS will make a difference as to where the problem may be. I once mistakenly thought I could link to them in a post on a CD/DVD site I co-administer *ahem* months later... In that light, it is difficult to even generalise, let alone list all the popular solutions. Try the easy stuff first, like power and data cabling - it must be firmly and positively seated and it's a good idea to use the new, supplied ribbon cable. If the drive is on the same cable as a hard disk then the optical drive must be jumpered as a slave (instructions on the drive unit) and placed in the middle and not on the end. A better move is to place the drive onto its own cable and IDE port. Try the drive in another PC to rule out drive failure from the get-go. As an aside, your new drive will be capable of digital output through the IDE cable (Digital CD Audio by Microsoft) and therefore you don't need the audio cable. You can enable digital audio via the device's properties in Device Manager.

THE PCPP INTERVIEW

This month we strapped Raja Koduri, an Engineering Manager at ATI responsible for performance analysis and optimisations on the R300 (RADEON 9700) family, into our pink interrogation cubbyhole o' torture. After inserting a few high voltage cattle prods into various orifices, here's what we got.

Curriculum Vitae

Name: **Raja Koduri**
 Company: **ATI**
 Location: **Santa Clara, Silicon Valley**
 Projects: **Engineering Manager, Performance Analysis and Optimizations for R300 family of hardware and software**

How did you get into the business of building these incredibly complicated devices? What sort of training, not to mention deranged personality traits, would somebody need to get into a similar position as yours?

Ever since I became familiar with programming computers I was fascinated by computer graphics and computer image synthesis. (This is the story of almost every other person that I work with). I did not envision myself to one day be in the business of building these complicated devices. The passion for computer graphics and the challenge of rendering complex images on the computer to be faster and faster, lead me from place to place. Eventually, I ended up with this great team at ATI, that can build these incredibly fast and complicated devices! A passion for graphics and a background in computer science, electrical engineering and mathematics are the deranged personality traits one needs to be in this position.

Describe the role you played in the development of the R300.

I was primarily involved with the performance analysis of the chip, performance validation and the software optimisation process. When you are building these big, complex accelerator chips, it's very important to make sure all the different blocks in the chip are working at maximum performance both individually and collectively. We put in a lot of effort to ensure we had no surprises when we got the chip back. We also developed various tools and systems to measure and validate performance.

The R300 (RADEON 9700 PRO) was a groundbreaking product, being faster than competing products by a factor of two or three in certain circumstances. How on earth did you guys manage to build a device that was so far ahead of the competition?

In hindsight, we seemed to have picked the right choices for all the top level tough decisions we had to make. 256-bit memory interface v/s 128-bit, 8 pixel pipes v/s 4, .15 um process v/s

0.13um process, full floating point shader core at full speed design v/s precision/speed trade-off design, equal importance to DX8 and below apps v/s DX9 and future, etc. But the most important factor is that we had an incredible engineering team that could build this device flawlessly and on time. Note that many potentially groundbreaking products end up looking less than stellar if the schedule is delayed and you may end up launching products a year or two later than you hoped for. Execution is one of the key factors

Since the release of the R300, performance increases have been incremental rather than massive. Do you think we'll see another product in the near future with such amazing performance gains as the R300 had over its competitors?

It's hard to say. It'll depend on how applications evolve in the next year or so. It'll also depend on how applications utilise the current DX9 class hardware. We look at the progress of applications very closely when we decide where to spend our gates and energies. I will not rule out the possibility of some amazing performance gains in some of the new applications in the near future with upcoming hardware.

Two of the most commonly used image quality technologies in use at the moment are anisotropic filtering and anti-aliasing. What other image quality technologies do you believe will be used as heavily in the future? There is still a lot of work to be done in the anti-aliasing area before we move onto other image quality technologies. The multi-sampling based technique we have in the R300 family, offers the best quality and performance trade-off. More work could be done to improve image filtering, too. An interesting thing to note is that with the availability of pixel shader technology, developers have the freedom to implement their choice of image quality features, too. For example, one can implement a custom type of filtering to obtain the quality, look and feel one desires.

Pixel shaders are becoming increasingly popular, and look like they'll be used extensively in many high profile games being released this Christmas. What are some of the coolest effects you've seen shaders being used for? Are there any nice effects that we haven't seen yet, but that you think are just waiting to be discovered?

The coolest effects I have seen shaders being used for this year are in the areas of simulating natural things (water, sky, atmospheric scatter of light, etc). Shaders were in use for close to 20 years in the offline rendering world for movies and television. So, more or less all the discoveries we have been seeing in the realtime world are related to making these previously pre-rendered effects run on modern hardware.

Raw performance versus image quality. Which is more important?

We are in the business of making graphics accelerators. The term 'accelerator' strongly implies performance. Image quality while delivering the realtime performance (read it as over 30fps or over 60fps based on the type of your application) is what is important to me. Obtaining a smooth and playable performance at a base level image quality is my first choice and increasing the image quality while maintaining the same smoothness and playability is my second.

How do you feel about the hand coding of drivers for specific applications? Is this really a necessary evil to get the best performance out of a specific application?

Driver optimisations that depend on application detection are very bad - especially the ones that compromise image quality, too. The presence of application specific optimisations in the driver indicate one or more of the following problems that end user should be aware of:

1. There is a problem with your hardware that you are working around specifically for this application.
2. There is a problem with the driver design that forces you down this path.
3. There is a problem with the

application itself that's making poor use of your driver and hardware. Optimising for reasons 1 and 2 usually indicates that you are likely to experience a wider range of problems with other applications. Companies do not have enough resources to do workarounds like these for all the applications, so they end up only optimising applications that are used for benchmarking (for example UT2003). Optimising for the 3rd type of problem is okay and generally a good service to the end user. However, this is only necessary if the application is not performing at a satisfactory level to begin with. Aiming for 'across the board' optimisations is the right approach as this provides better value for money for the end user - unless they are buying the card to play just a couple of games that are application detected by the drivers.

How far off until we've got truly photo-realistic graphics on our desktop PCs, being rendered in realtime? And we're not talking about a marketing department definition of photorealism - we're talking indistinguishable from the real deal. What are the major obstacles that need to be overcome first?

This is a very loaded question. The recent advances in the film special effects side prove that computers can generate images indistinguishable from the real deal. The work done with digital doubles in the new Matrix movie is amazing. Now, rendering such images even in non realtime is a huge challenge today. The character face models in matrix supposedly have 100 million polygons. Some of the datasets exceed the virtual address space available on 32-bit machines today. In short, we have a long way to go - but I believe we are headed down the right path. The feature parity between CPUs and GPUs in terms of rendering computations is bound to make this a very fun ride in the near future.

Virtual Reality is the holy grail of gaming. Is there any R&D going on at ATI that involves this technology, or is this more of a concern for the manufacturers of display devices? How far off do you think it is before we sit down to game with a head mounted display?

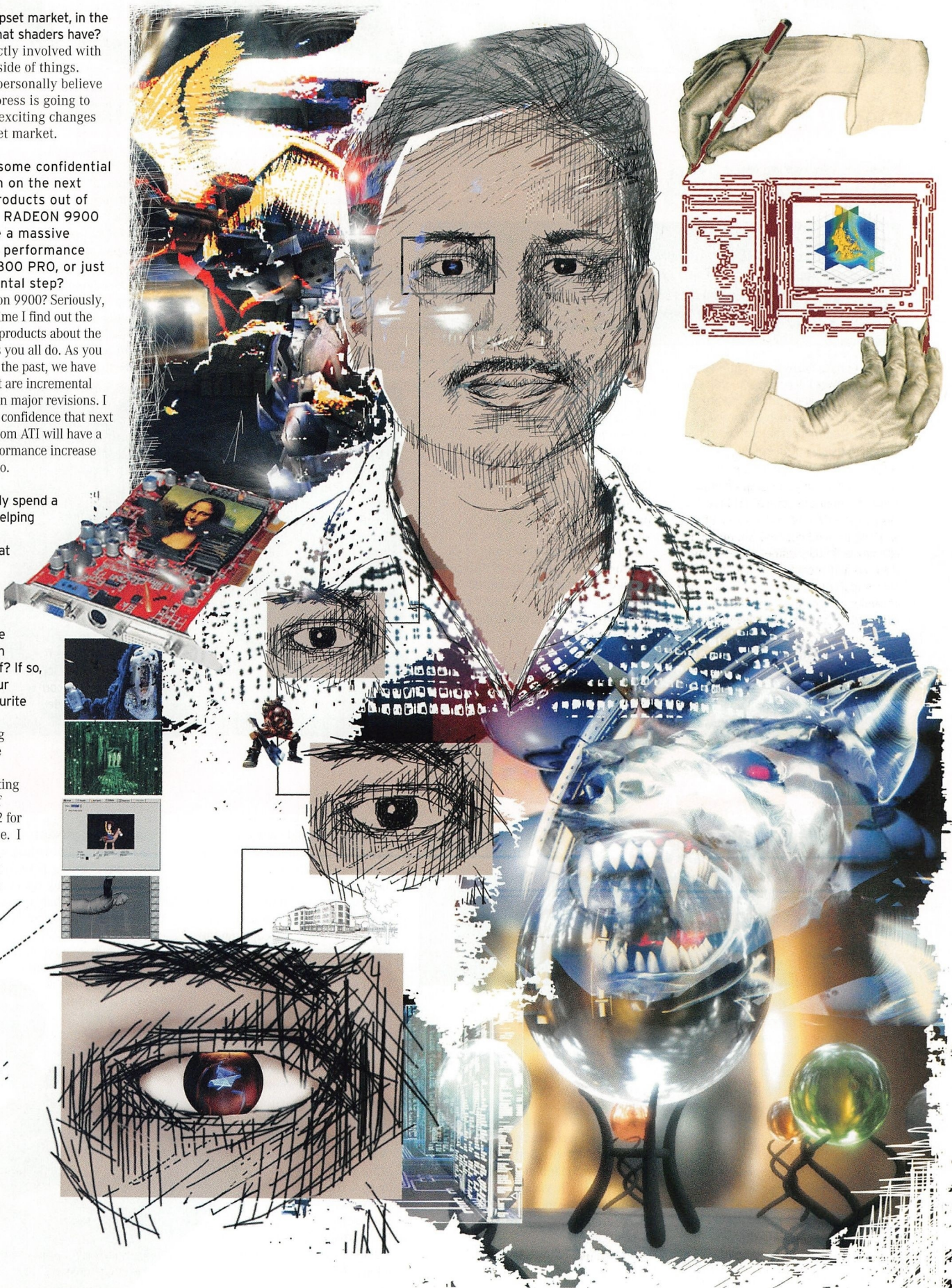
We are talking to the companies that work in this area. As far as I know, ATI is not directly involved in this particular territory.

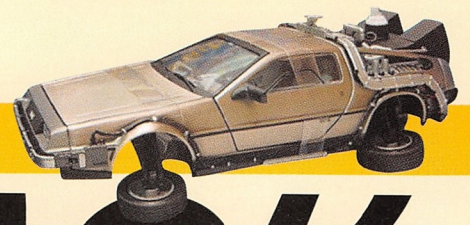
Are there any technologies being investigated by ATI that are likely to have a profound impact on the

graphics chipset market, in the same way that shaders have? I'm not directly involved with the chipset side of things. However, I personally believe that PCI express is going to bring some exciting changes to the chipset market.

So, tell us some confidential information on the next high end products out of ATI? Is the RADEON 9900 going to be a massive increase in performance over the 9800 PRO, or just an incremental step? What's Radeon 9900? Seriously, most of the time I find out the name of our products about the same time as you all do. As you have seen in the past, we have products that are incremental steps between major revisions. I can say with confidence that next major chip from ATI will have a massive performance increase over 9800 Pro.

You obviously spend a lot of time helping design the hardware that powers PC game graphics, but do you actually have an interest in gaming itself? If so, what are your current favourite games? I love fighting games on the consoles. I'm eagerly awaiting the release of SoulCalibur 2 for my Gamecube. I love games where I don't have to think much and just beat up others. :-)





FLASHBACK

Games and tech remembered with Anthony Fordham

ECSTATICA

Developer: Psygnosis
Genre: Action Adventure
Graphics Mode: SVGA, 256 colours, 640x480
Sound: 8-bit digital effects and speech
True 3D: Yes, using unusual ellipsoid modelling system
Operating System: DOS 5.0
Released: 1994

When it comes to 3D games we know what to expect - polygons, polygons, polygons. In other words, the engine throws a bunch of points into a 3D space, connects them up with lines, makes flat faces of the polygons those lines create, and then paints textures on those polygons. More polygons (plus the odd dash of curved jiggery-pokery) equals a more realistic object.

But back in 1994, with the 486DX-100 a top of the line processor and the Pentium only a twinkle in Intel's eye, polygons were blocky, jaggy, and generated worlds that looked like they were made of milk

cartons and matchboxes.

Enter Ecstatica, a game that saw the limitations of the technology of the day not as a restriction but as an opportunity for stylistic expression. Ecstatica (and its sequel) remain the only published games to abandon polygons in favour of ellipsoids.

That's right, rather than variations on a simple cube, the creatures and environments of Ecstatica were made up of differently shaped and elongated spheres or ellipsoids. It meant the game engine had to deal with fewer animated

vertices when generating characters and objects, which in turn meant a slick, well-oiled experience even on low end machines not commonly associated with 3D gaming.

As for the game itself, Ecstatica dealt with a Transylvanian-style village beset by an evil curse, in this case manifest by naked women impaled on spikes (long story). Avoiding the invincible werewolf, the player had to run around solving a series of fairly simple puzzles and finding missing

villagers before confronting the final boss and lifting the ancient curse.

The developer of Ecstatica tried to create a freeform gaming world but confused the concept with 'make the entire plot optional and allow the player to run straight to the end of the game less than an hour after starting'. Yes, less than an hour. If you blinked, you could have miss it.

Still, big points for trying something technologically different. Shame about the gameplay.



WHY IHNMAIMS DESERVES TO BE REMEMBERED

- Innovative ellipsoid-based 3D engine
- Decent stab at freeform gaming in an age of FMV on-rails snore-fests
- Naked chicks on spikes curiously inappropriate, but a talking point, nonetheless
- Sign of things to come: snazzy tech does not automatically a good game make

FLASHBACK TECH

THE JOYSTICK

Manufacturer: Various
Significance: Before Doom and before mouse and keyboard, this was the ultimate gaming input device. Was produced in such variety, in such quantity, and at least 90% of all joystick brands broke after a month's heavy use.
Cost: \$20 - \$1000
Released: Late 70s - present

Allow me to depart from our regular, single product flashback format to embrace and pay tribute to the humble joystick.

Without it, our early gaming years would have been... different. I won't say poorer, because most joysticks, unfortunately, were shoddily built, hardly worked, were uncomfortable in the hand and broke after only a few weeks' play.

Once upon a time, not so many years ago, you could walk into a gaming shop and see a whole wall full of joysticks. Joysticks, joysticks, stretching away into the gloom, contorted into many and fabulous

moulded plastic shapes, each representing some ideal of ergonomics put forward by a designer who, as it usually turned out, had no understanding of ergonomics or even the basic mechanics of the human hand.

In the beginning, the joystick was a metal rod sticking out of a square base with perhaps a little button on the top. It connected to the PC usually via a serial port, like a modem or a mouse, and required much fiddling to get working. These joysticks were best remembered for digging grooves and pits in your hand as your

furiously thrashed your way through Rick Dangerous, until the whole stick snapped right off and the thing had to be thrown away.

After a while, in the early 90s, joysticks got their own port - the game port! Usually located on the soundcard and doubling as a MIDI adaptor (okay, so it was really a MIDI adaptor doubling as a game port), the game port ushered in a new age of joystick design - decals! Sticks became huge moulded towering edifices of plastic, sometimes with bizarre form factors, but all came with Top Gun stickers, targeting reticle stickers, pretend scorch mark stickers, you name it. They all still broke after a month or two, though.

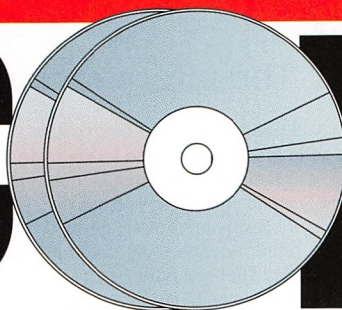
Nowadays, of course, if you own a joystick that isn't by Microsoft, Thrustmaster or Logitech, you're something of an oddity. A market chocked with

insta-break products retailing at \$200 each couldn't last, and indeed it didn't. The Big Three of joysticks ushered in a new age of ruggedisation, hardy plastics, metal bearings and, of course, force feedback and USB.

Where to next for this staple of gaming? Will we one day see a joystick with a Lifetime Guarantee? Stranger things have happened.



THE DISC



REQUESTS

We welcome requests so please forward your requests to Disc Producer Paul Noone via email at cdgod@next.com.au or write to PCPP DVD Requests, 78 Renwick St, Redfern NSW 2016



Welcome to another month of PC Powerplay disc goodness. For all you diehard America's Army fans out there, check out this month's Spotlight for America's Army: Operations version 1.9.0. We've decided to include it in both the DVD and CD discs, so people without DVD drives can also enjoy the realistic training and fighting of America's Army. Version 1.9.0 includes many new features, the most exciting being the inclusion of a Combat Medic. Aside from America's Army, we have also included six trailers for you. Three of these are the very entertaining Half Life 2 movies - Tunnels, Bugbait and Barricade. After watching these movies, I cannot wait for the game to come out.

Thanks to the good folks at Revolution and Scummvm, we have a copy of Beneath the Steel Sky for absolutely FREE and a number of top-notch demos. Firstly there is the underwater adventure game AquaNox

2, Conflict Desert Storm II, set during the first Gulf War and another game that I'm eagerly waiting for is XIII; this cel-shading FPS has a gripping story, as well as being visually magnificent. For all you sports nuts, we've included the latest Madden demo and check out the latest demo for TRON 2.0, including two modes: the Light Cycle and Disc Arena.

This month's Modplus includes the highly anticipated Natural Selection 2.0 mod which combines the fast action of a FPS with the tactics of a RTS game, in a futuristic world. Galactic Conquest is a BF 1942 mod based on the Star Wars galaxy that places you on the icy planet of Hoth. And last but not least the fun and quirky Half Life mod Monkey Strike.

Hope you have all have a great month, and remember, kill the cartoons!

Amos Hong - Disc Master
cdgod@next.com.au

Madden 2004
Northland
SpacePod
Caveman
Nexagon: Deathmatch
Think Tanks
Tron 2.0



MODS PLUS
Monkey Strike 1.2
Underworld Bloodline
Galactic Conquest
GC: Dusk on Planet Hoth
Multi Theft Auto: Vice City 0.1
Public-Enemy Beta 1.2



PATCHES
Civilization III 1.27
RollerCoaster Tycoon II:
Wacky Worlds
Raven Shield 1.4
Sailor of the Sky 2.18
Warcraft III 1.12
WCIII: The Frozen Throne 1.12
AirStrike 3D: Operation W.A.T. 1.4
Casino Inc. Retail Patch
Galactic Conquest 0.1a - 0.1b
Will Rock v1.2 Patch



ROM'S BUNKER
Heaps more wallpaper, games, Winamp skins, maps and addon files for all your favourites!



UTILITIES
3DNA Desktop 1.1
Abandon Loader
Adaptac ASPi Layer 4.71.2
Adobe Acrobat Reader 6.0
Advanced Zip Repair 1.6
AutoDivx Player 3.51
BitZipper 3.4.1
Burn4Free 1.0
Catalyst Radeon 3.2 7.84
Complete Online Gaming System
DivX Pro Bundle 5.0.5
DirectX 9.0
Download Accelerator 5.3
Fresh Download 5.8
GameSpy Arcade 1.3b

GeForceTweak Utility 3.2
GetRight 5.02
gmax 1.1
G Spot 2.2
HyperSnap-DX 5.2
It'sMe 2.05
IsoBuster 1.0
KaZaa Media Desktop 2.5.1
LEET Speak 1.2
Nero Burning ROM 5.5.10.28
NVIDIA drivers 45.23
Original CD Emulator 1.4
Ostat v0.31 (build 240 rel 4)
PC-cillin 2003
PCMark2002
PowerPoint Viewer 97 8.0
SANDRA Plus 2002 8.59
Screenshooter 7.0
Stuffit 7.0
VDM Sound 2.0.4
VIA Hyperion 4-in-1 4.47
Windows Media Player 9
Windows Movie Maker 2
WinRAR 3.2
Winzip 8.1
XP Smoker 2.7
Your Uninstaller! 2003 Pro 3.9.315
Zip Repair 1.0
ZoneAlarm 3.7.202

CD CONTENTS

CD 1
America's Army: Operations v1.9.0 FULL VERSION



CD 2 DEMOS
Beneath a Steel Sky-FULL GAME
BF1942: Secret Weapons of WWII
Conflict Desert Storm II
Madden 2004
SpacePod
XIII



PATCHES
RollerCoaster Tycoon II:
Wacky Worlds
Raven Shield 1.4
Sailor of the Sky 2.18
WCIII: The Frozen Throne 1.12



DVD CONTENTS

SPOTLIGHT
America's Army: Operations v1.9.0 FULL VERSION



TRAILERS
Anachronox - Part 8 of 13



C&C Generals: Zero Hour
Ground Control 2:
Operation Exodus
Half Life 2 Tunnels
Half Life 2 Bugbait
Half Life 2 Barricade



DEMOS
Beneath a Steel Sky-FULL GAME
AquaNox 2: Revelation
Conflict Desert Storm II
XIII
BF1942: Secret Weapons of WWII



Yellow Boots

RED

Launch Party Massacre 3

The International Gaming Festival Strikes Again

Unlike many sectors of the media who poo-poo the endless promotional parties, drinks nights, festivals, galas, expos and exhibitions they must endure as part of their job descriptions, we proud few who focus on the wonderful world of gaming are happy to attend any kind of gathering, at all, as long as there's free beer.

That's right, thanks to a new culture pioneered by the likes of my crazy ex-third flatmate, the unofficial Nintendo magazine editor known only as L- and my main PS2-playing man, Meatloaf, you too can enjoy the presence of the cream of gaming journalism at your next LAN, so long as there's a slab. Not light, full strength.

So the point in this case is that even though we had been savagely burned - and in my case nearly flung out of the back of an aeroplane at speed - by last year's International Gaming Festival, when the various cracks gathered at the fray of gaming heard that the IGF2003 was to be held at Ettalong Beach, NSW, in the new club, and most importantly have nothing at all to do with Microsoft, we were more than happy to attend.

"I'm more than happy to attend," L- confirmed to me as I passed the local tattooist where he was having a saucy image of Samus Aran indelibly applied to his left bicep, "I reckon this year there's a good chance that it actually will be international, you know, with international games and stuff, instead of just a bunch of Microsoft games and an international audience.

"Apparently there'll be a big Mongolian contingent this year," quipped my crazy ex-third flatmate from the other chair, who was in to have the word SIMON tattooed across one set of knuckles and the word GRFNKL tattooed across the other, despite this being completely against the laws of both NSW and good taste. "Isn't that right, L-?" he said, jogging the Nintendo editor's arm.

"Yaaargh!" said L-, as the tattooist's needle plunged into his flesh. And that's why L- no longer wears short sleeves.

Eventually, after much negotiation with various third parties including, but not limited to, six of the thirteen PR agencies that had blacklisted my crazy ex-third flatmate, we eventually secured invitations to IGF2003, on the proviso that my crazy ex-third flatmate would not bring any sort of fire starting device or accelerant, would not carry combustibles such as tinder, Little Lucifers or paper, would wear only fire-retardant clothing - namely a wool-knit suit owned by his grandfather

and soaked in distilled water for two days - and would submit to a strip search if necessary until the event organisers were satisfied that these demands had been met. He said okay.

When we finally arrived we discovered that the club - rather unexpectedly called El Mariachi - had not in fact yet been built.

"It's being patched," said my crazy ex-third flatmate, "Damn me if this club isn't in the process of being patched. It's a beta product. It's the perfect place to hold a gaming festival!"

To explain. The El Mariachi club had stood on Ettalong Beach's attractive foreshore for many years, and was lately being upgraded to offer its extensive membership the services they now came to expect, that is, electronic bingo and pokies. It was an ambitious plan to usher in a "new age of entertainment" and a small start-up I had once known had even been contracted to investigate the viability of setting up some kind of unique gaming system in the club involving PDAs with wireless links so you could lose money to complete strangers as you passed them in the hall. It turned out not to be viable, much like the brave start-up that had proposed it.

"And what do you call this then!" cried an exultant security guard after ferreting through my crazy ex-third flatmate's trenchcoat pockets and coming up with a small calibre pistol.

"No one said I couldn't bring a gun!" he protested as they hauled him away.

Inside, I found L- and the PS2 editor known only as Meatloaf. We weren't sure whether his magazine was an official licenced title or not, which was probably just the way his publishing company liked it. The stone-washed designer jean wearing staff of the real Official PlayStation2 Magazine stood in a far corner sipping pre-bottled vodka mixers pushed on them by pretty young girls, glowering at Meatloaf as he happily flaunted his grey-market status and massive thighs.

"So," I said, above the noise of the drilling, "seen any games yet?"

L- shook his head. "This is ridiculous man, like, you think they'd stop building this club and stuff just for one night so we can play a few games," he spluttered.

Meatloaf ogled another PR lass as she sashayed past, her get-the-journo's-attention chip in full operation, her M-class conditioning only slightly stymied by the fact there didn't seem to be anything to draw his attention to.

"Where are all the games?" I said again.

A bunch of unfamiliar faces attached to shabbily dressed bodies with thin arms, limp hands and pasty fingers clutching battered passports appeared in the cavernous and party constructed entrance arch.

"Ah," rumbled Meatloaf, "the foreign press."

One guy wearing a black suit that looked suspiciously similar to the one I had flogged from the hotel I used to work for before I discovered that gaming journalism gave me more opportunities to sit on my arse in front of the TV, approached. His boots, I noted, were bright red.

"Alright?" he said, "We're from Britain, isn't it? I'm the guy who wears red Docs." My boots, THE boots, growled and tugged at their laces. "I write, you know, commentary and self referential satire, isn't it?"

Then the guy indicated another 'geezer' standing next to him dressed in a tattered black trenchcoat with extraordinarily long hair. "This is my mum's ex-lodger, isn't it?" he said, presumably rhetorically, "He's mad." The guy in question indicated, through use of signs with which I was all too familiar, that he would like to burn down the club and all who stood in it.

Then the Guy Who Wears Red Docs gestured at a big fat fellow with an unlikely bleached blond afro. "And this here geezer edits a PS2 mag back home, but we don't know if it's official or not, isn't it? We call him Pot Roast."

Finally, as my jaw worked its way toward the floor, he turned to another chap with a lean and hungry look not softened in the slightest by all the aggressive tattoos he had seen fit to decorate himself with.

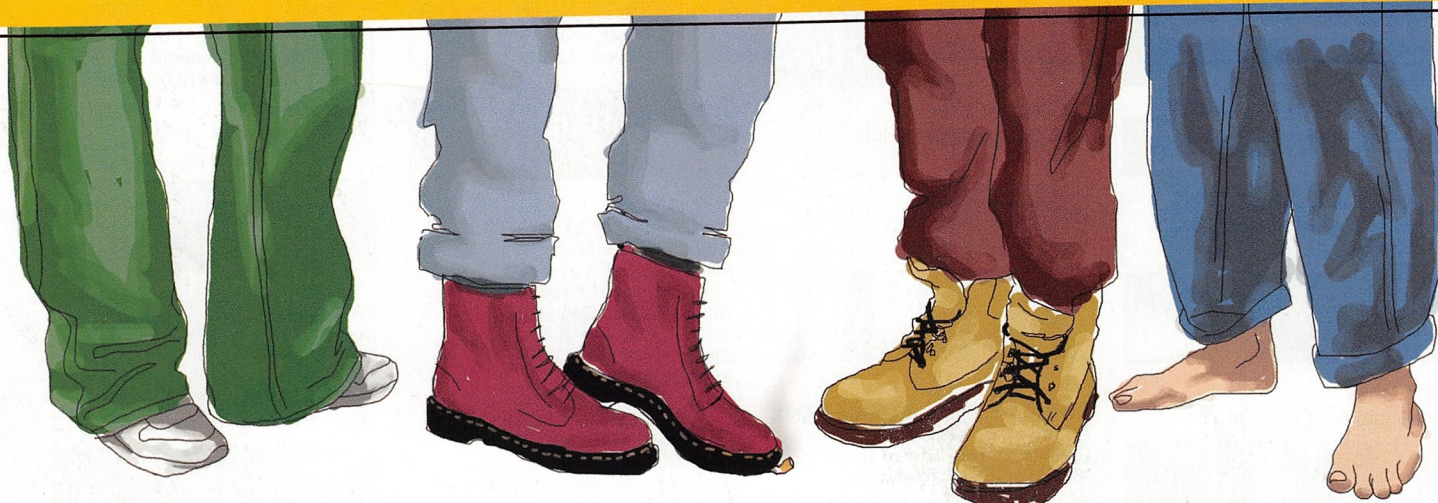
"Lastly, but hardly leastly, this is the guy who edits our unofficial Nintendo mag. We just call him V- isn't it?"

There was a long and dangerous pause.

"If you'd all like to come through, the developers are ready now!" chirruped a PR gal as her Assess Awkward Situation Before Calming With Real Delicacy System (AASBCWRDS) kicked in. She made one of those Wheel of Fortune prize model type gestures toward the tastefully (okay, not at all tastefully) draped door to the conference centre.

I glowered at the newcomers, and headed for the open bar, vowing to get to the bottom of this.

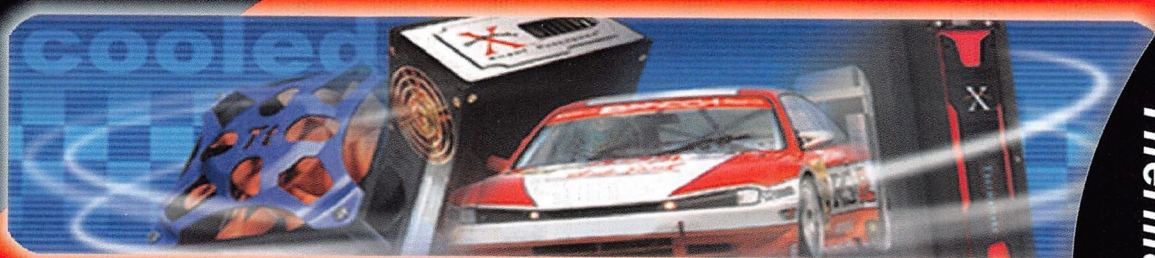
Incidentally, if you wanted to eat at El Mariachi you can't now, because of the International Gaming Festival 2003. But more on that next issue.



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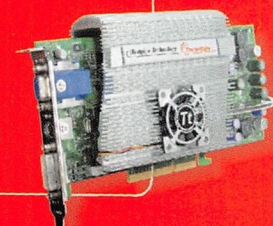
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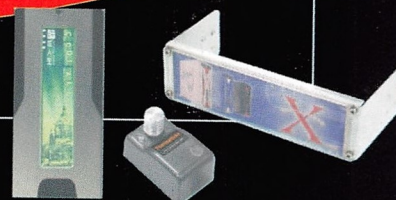
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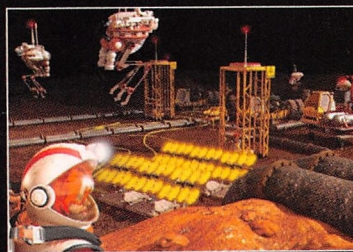
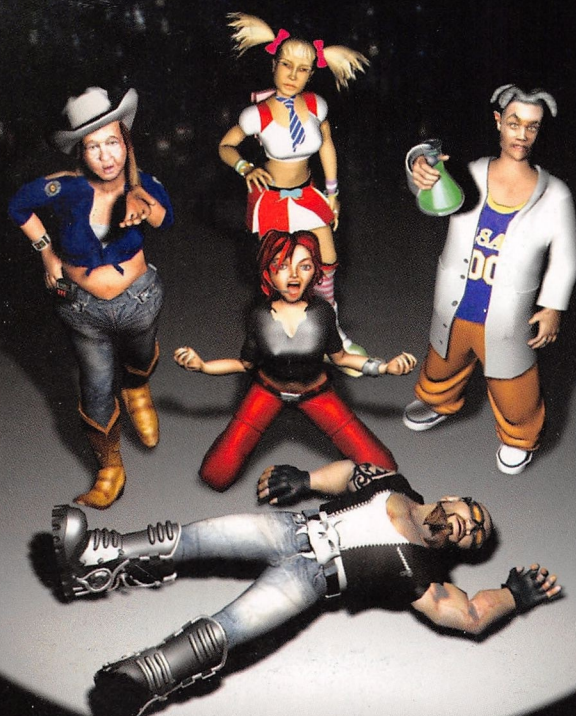
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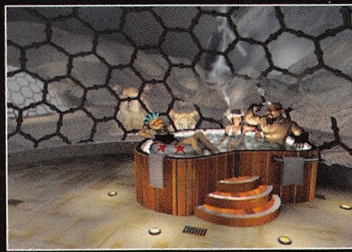
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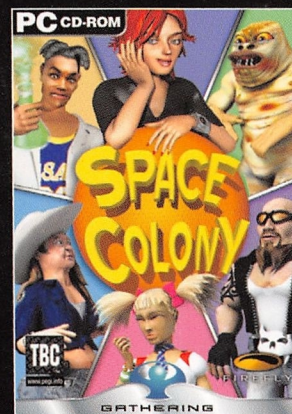
A planet to be built...



...with 20 misfits colonising...



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